



**Marathon
Oil Company**

P.O. Box 2690
Cody, Wyoming 82414
Telephone 307/587-4961

October 15, 1987

State of Utah
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Gentlemen:

Attached please find three copies of the Federal Application for Permit to Drill the Cherokee #1-11 well located in Section 11, Township 37 South, Range 23 East, San Juan County, Utah.

During the on ground staking of this well, the original legal surface location, SW SW 500' FSL & 600' FWL of Section 11, T37S, R23E was surveyed and staked. However, due to the rugged terrain and an overabundance of archeological sites the surface location had to be moved to a new location. The new surface location at which the well will be drilled is SW SW 760' FSL & 285' FWL of Section 11, T37S, R23E. This location is an exception to Rule R615-3-2.

Because of this, Marathon Oil Company requests that approval be granted to drill the well from this surface location with the stipulation that the well will be directionally drilled so that when the well bore penetrates the hydrocarbon bearing formation, the Upper Ismay, the well bore will be within a legal and acceptable location, (in accordance with Rule R615-3-2), within the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 11, Township 37 South, Range 23 East. Also, if required by the Division, a directional survey will be run in order to verify the location of the well bore at that point.

Your continued cooperation is greatly appreciated.

Sincerely,

MARATHON OIL COMPANY

R. P. Meabon
Regulatory Coordinator
Rocky Mountain Region

RPM/FMK/rrm

Attachments

RECEIVED
OCT 19 1987

DIVISION OF
OIL, GAS & MINING

RECEIVED
OCT 19 1987
UNITED STATES
DEPARTMENT OF THE INTERIOR
DIVISION OF
BUREAU OF LAND MANAGEMENT

SUBMIT IN THE STATE*
(Other instructions on
reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER

SINGLE
ZONE ☒

MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

Marathon Oil Company

3. ADDRESS OF OPERATOR

P. O. Box 2690, Cody, Wyoming 82414

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)*

SW SW 760' FSL & 285' FWL

SW SW 500' FSL & 600' FWL

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

Approximately 6.5 miles Southeast of Blanding, Utah

15. DISTANCE FROM PROPOSED*

Surface Location

16. NO. OF ACRES IN LEASE

160

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

N/A

19. PROPOSED DEPTH

6374'

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

5851' GI Before Grading

22. APPROX. DATE WORK WILL START*

ASAP

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	36#	2250'	Sufficient to Surface.
7-7/8"	5-1/2"	15.5#	0-5374'	Sufficient to Surface
7-7/8"	5-1/2"	17.0#	6374'-5374'	Casing Shoe.

Marathon Oil Company proposes to drill the above referenced well through the Akah Formation to an estimated TD of 6374'. A 12-1/4" hole will be drilled to approximately 2250' and 2250' of new 9-5/8", 36#, K-55, ST&C casing will be run and cemented to surface. A 7-7/8" hole will then be drilled to an estimated TD of 6374' where new 5-1/2", 17#, K-55, LT&C casing will be run from TD to 5374'. From 5374' to surface new 5-1/2" 15.5#, K-55, LT&C casing will be run and cemented. The well will be logged, perforated, and production rates will be tested. The perforated interval may be acidized or fracture treated. The well will then be placed on production.

BLM-Orig & 3--cc: UDOGM-3, WRF, FMK, Drilling-3, Title & Contract (Houston)-2

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

RPMelan

TITLE Regulatory Coordinator

DATE October 15, 1987

(This space for Federal or State office use)

PERMIT NO.

43-037-3/357

APPROVAL DATE

APPROVED BY THE STATE

OF UTAH DIVISION OF
OIL, GAS, AND MINING

APPROVED BY

TITLE

DATE 10-22-87

BY John R. Baker

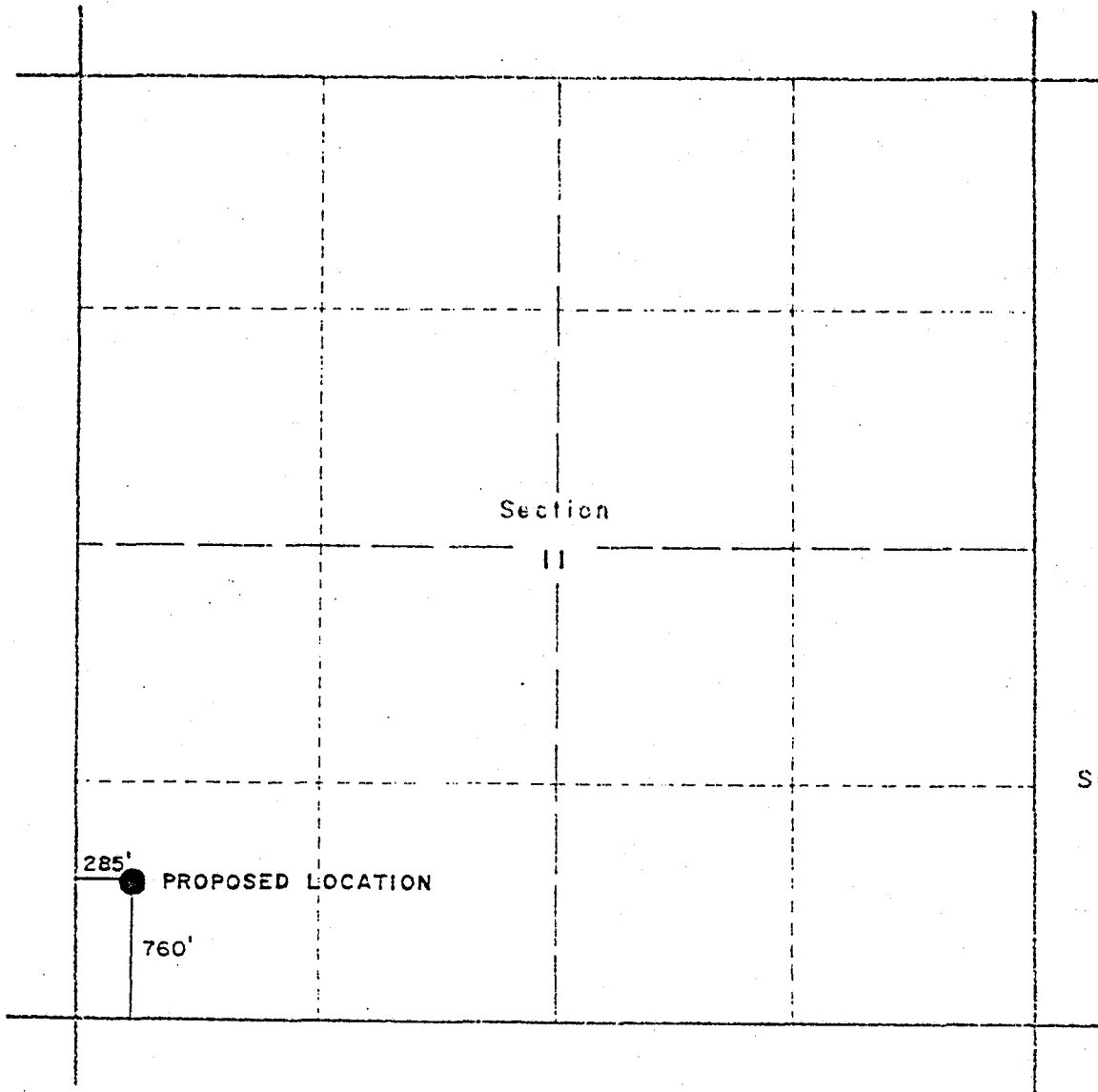
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

WELL SPACING: R615-3-2

RECEIVED
OCT 19 1987

DIVISION OF
OIL, GAS & MINING



WELL LOCATION: MARATHON OIL CO. - CHEROKEE NO. 1-II

Located 760 feet North of the South line and 285 feet East of the West line of Section 11
Township 37 SOUTH Range 23 East SALT LAKE Meridian

Existing ground elevation determined at 5851 feet based on USGS datum.

I hereby certify the above plat represents a survey
made under my supervision and that it is accurate
to the best of my knowledge and belief.

Frederick H. Reed

FREDERICK H. REED
Registered Land Surveyor

Exhibit 'B'

MARATHON OIL CO.
Cody, Wyoming

WELL LOCATION PLAT
Cherokee No. 1-II
Sec. 11 T37S, R23E
San Juan County, Utah

CLARK - REED & ASSOC.
Durango, Colorado

DATE: Sept. 30, 1987
FILE NO: 67019

MOAB DISTRICT

CONDITIONS OF APPROVAL FOR PERMIT TO DRILL

Company: Marathon Oil Company Well Name: Cherokee #1-11

Location: Section 11, T. 37 S., R. 23 E. Lease No.: U-57881

760' FSL, 285' FWL

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas Order No. 1, and the approved plan of operations. The operator is fully responsible for the actions of subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

A. DRILLING PROGRAM

1. Surface Formation and Estimated Formation Tops: Refer to Item #2 of attached "Drilling Operations Plan".
2. Estimated Depth at Which Oil, Gas, Water, or Other Mineral Bearing Zones are Expected to be Encountered:

	<u>Formation</u>	<u>Zone</u>
Expected oil zones:	<u>Refer to Item 3 of Attached "DOP".</u>	
Expected gas zones:	<u>Refer to Item 3 of attached "DOP".</u>	
Expected water zones:	<u>Refer to Item 3 of attached "DOP".</u>	
Expected mineral zones:	<u>Refer to Item 3 of attached "DOP".</u>	

"DOP" - Drilling Operations Plan

All fresh water and prospectively valuable minerals (as described by BLM at onsite) encountered during drilling, will be recorded by depth, cased, and cemented. All oil and gas shows will be tested to determine commercial potential.

3. Pressure Control Equipment: Refer to Item 7 of the attached "Drilling Operations Plan".

BOP systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout preventor controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs.

4. Casing Program and Auxiliary Equipment: Refer to Item 6A and 9A of the attached "Drilling Operations Plan".

Anticipated cement tops will be reported as to depth, not the expected number of sacks.

5. Mud Program and Circulating Medium: Refer to Item 8 of the attached "Drilling Operations Plan".
6. Coring, Logging and Testing Program: Refer to Item 4 of the attached "Drilling Operations Plan".

Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Two copies of all logs, core descriptions, core analysis, well-test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with Form 3160-4. If requested, samples (cuttings, fluids, and/or gases) will be submitted to the District Manager.

7. Abnormal Conditions, Bottom Hole Pressures and Potential Hazards: Refer to Item 5 of the attached "Drilling Operations Plan".
8. Anticipated Starting Dates and Notifications of Operations:

The operator will contact the San Juan Resource Area at 801-587-2141, 48 hours before beginning any dirt work.

No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the District Manager. If operations are to be suspended, prior approval of the District Manager will be obtained and notification given before resumption of operations.

The spud date will be reported orally to the San Juan Area Manager, a minimum of 24 hours before spudding. A Sundry Notice (Form 3160-5) will be sent within 24 hours after spudding, reporting the spud date and time. The Sundry will be sent to the District Manager. If the spudding is on a weekend or holiday, the Sundry will be submitted on the following regular work day.

In accordance with Onshore Oil and Gas Order No. 1, this well will be reported on Form 9-329 "Monthly Report of Operations," starting with the month in which operations begin and continue each month until the well is physically plugged and abandoned. This report will be sent to the BLM District Office, P. O. Box 970, Moab, Utah 84532.

Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported to the Resource Area in accordance with requirements of NTL-3A.

If a replacement rig is planned for completion operations, a Sundry Notice (Form 3160-5) to the effect will be filed, for prior approval of the District Manager. All conditions of this approved plan are applicable during all operations conducted with the replacement rig. In emergencies, verbal approval can be given by the District Petroleum Engineer.

If the well is successfully completed for production, then the District Manager will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communication, not later than 5 business days following the date on which the well is placed on production.

No well abandonment operations will begin without the prior approval of the District Manager. In the case of newly drilled dry holes for failures, and in emergencies, oral approval will be obtained from the District Petroleum Engineer. A "Subsequent Report of Abandonment" (Form 3160-5), will be filed with the District Manager, within 30 days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration.

Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the San Juan Area Manager, or the appropriate surface manager.

Approval to vent/flare gas during initial well evaluation will be obtained from the District Office. This preliminary approval will not exceed 30 days or 50 MMCF gas. Approval to vent/flare beyond this initial test period will require District Office approval pursuant to guidelines in NTL-4A.

Upon completion of the approved plugging, a regulation marker will be erected in accordance with 43 CFR 3162.6. The following information will be permanently beaded-on with a welding torch: Federal Well Number, location by 1/4 1/4 section, township and range, Lease number.

A first production conference will be scheduled within 15 days after receipt of the first production notice. The San Juan Area Manager will schedule the conference.

Other: _____

The following may be inspected and or witnessed:

1. The cementing and testing of surface casing, testing BOP's.
2. (Dry Hole) Setting and testing of surface casing shoe plug.
3. (Depleted Producer) The setting and testing of plugs across producing horizon and if applicable the surface casing shoe plug and/or annulus (casing to formation) squeeze jobs.

Notify the San Juan Resource area (Mike Wade) one day or on dry hole as soon as possible prior to the above at (801) 587-2141 (Home) (801) 587-2026 or if unable to reach Mike, call Moab District office Steve Jones (801) 259-6111.

MARATHON OIL COMPANY
Cherokee #1-11
AFE #5-576-7
Drilling Operations Plan
550' FSL, 550' FWL, (BHL)
Sec. 11, T37N, R23W
San Juan County, Utah
Elevation: 5864' KB (est.)
5848' GL

October 13, 1987

1. Geologic name of surface:

Jurassic Morrison Formation

2. Estimated tops of important geologic markers:

<u>Formation</u>	<u>Depth (K.B.)</u>	<u>Depth (From Sea Level)</u>
Upper Ismay	5984'	-120'
Hovenweep	6129'	-265'
Lower Ismay	6174'	-310'
Gothic	6224'	-360'
Desert Creek	6256'	-392'
Chimney Rock	6328'	-464'
Akah	6354'	-490'
TD	6374'	-510'

3. Estimated depths of anticipated water, oil, gas or other mineral bearing formations:

<u>Formation</u>	<u>Depth (K.B.)</u>	<u>Possible Content</u>
Upper Ismay	5984	Gas-Oil

4. Sample, logging, testing, and coring program:

DLL-GR-Cal from TD to 1900'±.

FDC-CNL-GR-Cal from TD to 1900'±.

BHC Sonic from TD to 1900'±.

Two DST's are anticipated: one in the Upper Ismay and one in Desert Creek.

No coring is anticipated.

Mud loggers will be present from surface casing to TD.

Samples will be caught, bagged, and dried in 30' intervals from 4500' to 5600' and then in 10' intervals to TD or as specified by the Company Representative.

5. Anticipated pressures or temperatures:

Maximum anticipated bottom hole pressure is 2100 psi.

Maximum anticipated bottom hole temperature is 140°F.

6a. The casing program including the size, grade, weight, whether new or used, and a setting depth of each string:

<u>Min. Hole Size</u>	<u>Casing O.D.</u>	<u>Grade</u>	<u>Weight</u>	<u>Setting Depth</u>	<u>New or Used</u>	<u>Cplg</u>
20"	16"	X-42	42.0#	80'	New	PE
12 $\frac{1}{4}$ "	9 5/8"	K-55	36.0#	2,250'	New	ST&C
7 7/8"	5 $\frac{1}{2}$ "	K-55	15.5#	5,374'	New	LT&C
	5 $\frac{1}{2}$ "	K-55	17.0#	6,374'	New	LT&C

6b. The cementing program including type, amounts, and additives:

9 5/8" Surface Casing

Cement Height: 2250' to surface

The casing will be cemented with 600 sacks blended light cement followed by 265 sacks of blended Class 'B' cement. If cement column falls, a 1" top job will be performed. At least ten barrels of water will precede the cement slurry.

Lead Slurry: $1750' \times .3132 \text{ ft}^3/\text{ft} + 100\% \text{ excess} = 1096 \text{ ft}^3$

Weight: 12.7 ppg
 Yield: 1.84 ft³/sack
 Mix Water: 9.9 gallons/sack
 Cement Required: 600 sacks

6b. The cementing program: (continued)

Tail Slurry: $500' \times .3132 \text{ ft}^3/\text{ft} + 100\% \text{ excess} = 313 \text{ ft}^3$

Weight:	15.6 ppg
Yield:	1.18 ft ³ /sack
Mix Water:	5.2 gallons/sack
Cement Required:	265 sacks

Casing equipment will include a float shoe, a float collar and centralizers placed in the middle of the shoe joint and at the top of every third joint to surface. Waiting on cement time will be eight hours; casing is not to be disturbed until cement has fully set.

5 1/2" Production Casing

Cement Height: 6374' to 2174' = 4200'

The production casing will be cemented with 425 sacks of light-weight cement followed by 110 sacks of class 'B' with 0.6% fluid loss additive.

The actual volume will be calculated from the caliper log + 25% excess to place the cement top inside the surface casing.

Lead Slurry: $3600' \times .1733 \text{ ft}^3/\text{ft} + 25\% \text{ excess} = 780 \text{ ft}^3$

Weight:	12.7 ppg
Yield:	1.84 ft ³ /sack
Mix Water:	9.9 gal/sack
Cement Required:	425 sacks

Tail Slurry: $600' \times .1733 \text{ ft}^3/\text{ft} + 25\% \text{ excess} = 130 \text{ ft}^3$

Weight:	15.6 ppg
Yield:	1.18 ft ³ /sack
Mix Water:	5.2 gal/sack
Cement Required:	110 sacks

Casing equipment will include a float shoe, a float collar and centralizers at one per joint from TD to 200' above the Ismay and spaced every third joint to surface casing. Cable type scratchers will be run every 15' from TD to 200' above the Ismay. After cementing, the casing will be landed in the head with the full weight of the casing string set in the slips.

Final cement volumes will be calculated from the Caliper log.

7. B.O.P. specification and testing:

A 16" hydril and diverter system will be used while drilling the surface hole.

BOP equipment will include pipe and annular preventer. All equipment while drilling below surface casing will have a minimum working pressure of 3000 psi. The accumulator will be of sufficient size to open and close all components without using the pump. The minimum testing requirements will be as follows:

- a) All ram-type preventers will be tested to the rated working pressure of the stack or to 70% of the internal yield of the casing, whichever is less.
- b) The annular-type preventer will be tested to 50% of its rated working pressure.
- c) Tests will be run at the time of installation and following repairs, prior to drilling out of each casing shoe, and at least every 30 days.

8. Mud Program and anticipated pressures:

<u>From</u>	<u>To</u>	<u>Type Mud</u>	<u>Weight</u>	<u>Vis.</u>	<u>Oil %</u>	<u>Water Loss</u>
0'	2250'	Water/Gel	8.5	36-40	0	No Control.
2250'	5500'	Chem-Gel	8.5-9.0	38-41	0	15-20
5500'	TD	Chem-Gel	8.5-9.0	41-45	0	12-15
Logging		Chem-Gel	8.5-9.0	50-55	0	12-15
Cementing		Chem-Gel	8.5-9.0	32-36	0	12-15

Treatment of the anhydrite section above the Ismay may be necessary to maintain good mud qualities.

9a. Type of drilling tools and auxiliary equipment:

- A. A kelly cock of 3000 psi WP will be used.
- B. A pit volume indicator, mud flow indicator, and pump pressure recorder will be used.
- C. A 3000 psi working pressure full opening safety valve will be available to stab into the drill pipe when necessary if the kelly is not in the string.
- D. Casing strings - "All casing strings shall be pressure tested (0.2 psi/ft. or 1000 psi, whichever is greater) prior to drilling the plug after cementing; test pressure should not exceed 70% of the casing's internal yield pressure.
- E. A drilling rate recorder calibrated to record drilling time for each one foot interval will be used.

9b. Deviation Control:

Surface Location: 760' FSL, 285' FWL, Sec. 11, T37S, R23E
Bottom Hole Location: 550' FSL, 550' FWL, Sec. 11, T37S, R23E
Azimuth: S52E
Displacement: 338'

<u>From</u>	<u>To</u>	<u>Maximum Distance Between Surveys</u>	<u>Maximum Deviation From Vertical</u>	<u>Maximum Change Per 100' of Depth</u>
0'	2250'	90'	2°	1°
2250'	TD	90'	TBA	TBA

The natural drift of the wellbore is unknown. Target radius is 50'. It is essential that the location of any point through the productive interval remains at least 500' FSL and 500' FWL due to lease boundary stipulations. At least one motor run will be required.

10. The anticipated duration: 15 Days.

REGION APPROVAL

Approved

Date

Originator: Jim Barts

10/14/87

THC: _____

FFS: FFS

10/14/87

TNT: _____

DRT: _____

WTR: _____

DES: _____

JLM: _____

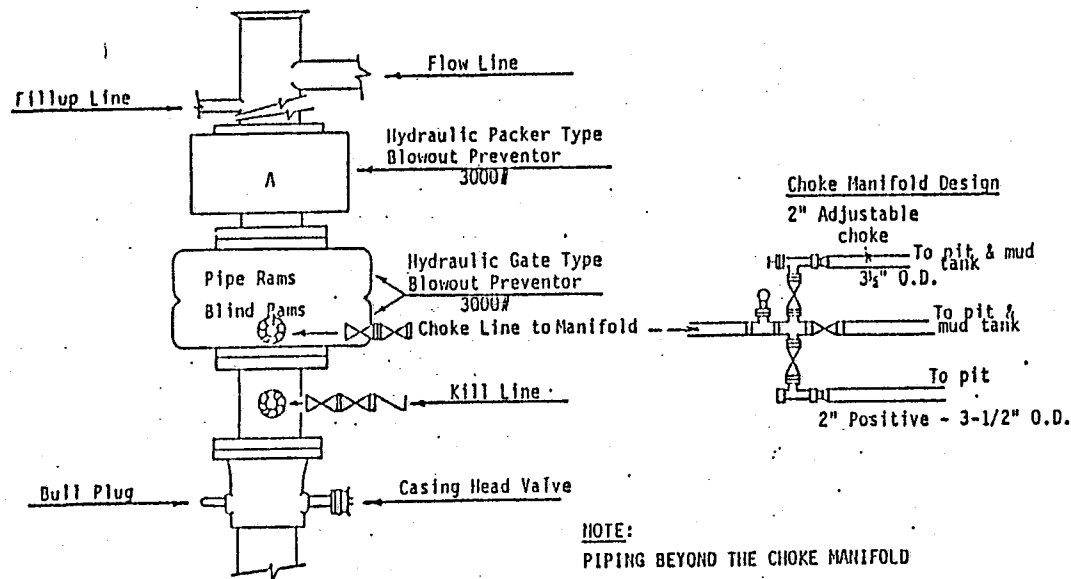
RJD: _____

JRK: _____

CASING DESIGN

Well Cherokee #1-11 AFE # 5-576-7

[illegible]

Exhibit 'D'NOTE:PIPING BEYOND THE CHOKER MANIFOLD

1. Adjustable choke line - Tee and two valves for flow to either the mud tank or pit.
2. Full opening line - Tee and two valves for flow to either the mud tank or pit.

1. Blowout preventors, master valve, plug valves, and all fittings must be in good condition. Use new API seal rings.
2. All fittings (gates, valves, etc.) to be of equivalent pressure rating as preventors. Valves to be flanged and at least 2" unless otherwise specified. Valves next to BOP to be plug type and nominal 3".
3. Equipment through which bit must pass shall be as large as the inside diameter of the casing that is drilled through.
4. Safety valve (OMSCO or equivalent) must be available on rig floor at all times and with proper connections. The ID of safety valves should be as great as ID of tool joints or drill pipe.
5. Kelly safety valve installed, same working pressure as BOP.
6. All lines and controls to preventors must be connected and tested before drilling out of surface pipe.
7. BOP's must be fluid operated, complete with accumulator. Controls may be either on floor or ground near steps from rig floor.
8. Fillup line tied to drilling nipple, the connection must be below and approximately 90° to the flow line.
9. Gauge will be installed for testing but removed while drilling.
10. Casinghead and casinghead fittings to be furnished by Marathon Oil Company.
11. Chokes must be adjustable and positive.
12. One side of casinghead may be bull plugged.

WHEN DRILLING -- USE:

Top preventor -- Drill pipe rams.
Bottom preventor -- Blinds rams.

WHEN RUNNING CASING -- USE:

Top preventor -- Casing rams.
Bottom preventor -- Blind rams.

BLOWOUT PREVENTION POLICY

1. Light Plant will be located a minimum of 125' from the well.
2. Rig will be equipped with a vapor proof lighting system. A switch panel will be located on rig floor to provide sufficient circuits for maintaining light on rig floor and under the substructure during blowout. All other lights will be out in the event of a blowout.
3. Engine exhausts will be horizontal and equipped with a remote operated spray system.
4. Pump and drawworks engines will have a remote ignition 'kill' system readily accessible to the driller.
5. All vehicles will be parked at least 125 feet from the well unless supplying rig material.
6. The Contract Pusher will instruct each man of his duties in case of an emergency and inform Marathon of these duties.
7. The Contract Pusher on each rig will have blowout preventer and fire drills with each crew once each week and note same in Marathon Log Book.
8. The Contract Pusher will instruct derrickman in the use of the Geronimo.
9. Gate type blowout preventers and choke manifold valves will be operated on each trip out for a new bit and so noted in the log book. All valves will be equipped with handles.
10. Blowout preventers will stay in place and be operable until casing is cemented and packing and slips are in place.
11. The choke line will be cleaned from the BOP's to the pit immediately under surface and once a week thereafter.
12. Manual handles must be on blowout preventers.
13. The pipe from the blowout preventer to the choke manifold will be kept free of all sharp bends.
14. The choke manifold will be out from under the rig floor and braced.
15. Choke lines will run straight from rig and be tied down.
16. The choke lines will be run to the reserve pit and/or mud tank as indicated on the attached Exhibit.

THIRTEEN POINT SURFACE USE PLAN
Cherokee #1-11

1. Existing Roads:

- a. Location of proposed well in relation to town or other reference point: See vicinity map Exhibit 'A' and the well location in relation to Blanding, Utah.
- b. Proposed route to location: County roads, see vicinity map Exhibit 'A'.
- c. Plans for improvement and/or maintenance of existing roads: The roads will be maintained in as good or better condition than they now exist.
- d. An encroachment permit will be obtained from the San Juan County Road Dept., (801) 587-2231, ext. 43.
- e. Other: Permit is presently being obtained.

2. Planned Access Roads:

- a. The maximum total disturbed width will be 30 feet for 1-1/2 miles.
- b. Maximum grade: N/A
- c. Turnouts: As needed
- d. Location (centerline): Flagged
- e. Drainage: As needed
- f. Surface Materials: If access is utilized during wet winter weather, road surfacing may be required to prevent road maintenance problems.
- g. Other: A R-O-W is requested for the off-lease roads in section 10 and 15 as shown on the attached map, Exhibit 'C'.

Surface disturbance and vehicular travel will be limited to the approved location and approved access route. Any additional area needed will be approved in advance by the San Juan Area Manager.

The access road will be water barred or brought to Class III Road Standards within 60 days of dismantling of the drill rig. If this time frame cannot be met, the San Juan Area Manager will be notified so that temporary drainage control can be installed along the access road.

The Class III Road Standards which ensure drainage control over the entire road through the use of natural, rolling topography; ditch turnouts; drainage dips; outsloping; crowning; low water crossings; and culverts will be determined at the appropriate field inspection.

3. Location of Existing Wells:

See Exhibit 'C'.

4. Location of Tank Batteries and Production Facilities:

All permanent (on site for 6 months or longer) above ground facilities (including pump jacks) will be painted a flat, nonreflective, earthtone color to match the standard environmental colors, as determined by the Rocky Mountain 5-State Interagency Committee. All facilities will be painted within 6 months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded. The color will be Sandstone.

If a tank battery is constructed on this lease, it will be surrounded by a dike of sufficient capacity and contain 1-1/2 times the storage capacity of the largest tank within the battery.

All loading lines will be placed inside the berm surrounding the tank battery.

All site security guidelines identified in 43 CFR 3162.7 regulations will be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed.

All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the District Manager.

Gas meter runs for each well will be located within 500 feet of the wellhead. The gas flowline will be buried from the wellhead to the meter and 500 feet downstream of the meter run or any production facilities. Meter runs will be housed and/or fenced.

The oil and gas measurement facilities will be installed on the well location. The oil and gas meters will be calibrated in place before any deliveries. Tests for meter accuracy will be conducted monthly for the first 3 months on new meter installations and at least quarterly thereafter. The San Juan Area Manager will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports will be submitted to the San Juan Area Manager. All meter measurement facilities will conform with the API standards for liquid hydrocarbons and the AGA standard for natural gas measurement.

5. Location of Type of Water Supply:

All water needed for drilling purposes will be obtained from: Recapture Reservoir, refer to Exhibit 'C' for water haul route.

Use of water for this operation will be approved by obtaining a temporary use permit from the Utah State Engineer, (801) 637-1303 and by receiving permission from the land owner or surface management agency to use the land containing the water source.

6. Source of Construction Material:

Pad Construction material will be obtained from: Native material

The use of materials under BLM jurisdiction will conform to 43 CFR 3610.2-3.

7. Methods of Handling Waste Disposal:

The reserve pit will not be lined with commercial bentonite sufficient to prevent seepage. At least half of the capacity will be in cut. However, if determined by the dirt contractor that the pit needs line, it will be line with bentonite.

Three sides of the reserve pit will be fenced with four strands of barbed wire before drilling starts. The fourth side will be fenced as soon as the drilling is completed. The fence will be kept in good repair while the pit is drying.

A trash pit or cage will be constructed near the mud tanks and dug at least six feet into solid undisturbed material. It will be totally enclosed with a fine wire mesh before the rig moves in. The road and pad will be kept litter free.

A burning permit is required for burning trash between May 1 and October 31. This can be acquired by notifying the San Juan County Sheriff at (801) 587-2237.

Produced waste water will be confined to an unlined pit for a period not to exceed 90 days after initial production. During the 90 day period an application for approval of a permanent disposal method and location, along with the required water analysis, will be submitted for the District Manager's approval pursuant to Onshore Oil and Gas Order No. 3 (NTL-2B).

8. Ancillary Facilities:

Camp facilities will not be required.

9. Well Site Layout:

The reserve pit will be located: See Exhibit 'J'

The top 3-4 inches of soil material will be removed from the location and stockpiled separate from the trees on the long side and back end. Topsoil along the access will be reserved in place.

Access to the well pad will be from: Shared R-O-W with Meridian and will enter the pad on the North side. Refer to Exhibit 'C'.

10. Reclamation:

- a. Immediately on completion of drilling, all trash and debris will be collected from the location and surrounding area. All trash and debris will be disposed of in the trash pit and will then be compacted and buried under a minimum of two feet of compacted soil.
- b. The operator/holder or his contractor will contact the San Juan Resource Area office in Monticello, Utah (801) 587-2141, 48 hours before starting reclamation work that involves earthmoving equipment and upon completion of restoration measures.
- c. Before any dirt work to restore the location takes place, the reserve pit must be completely dry.
- d. All disturbed areas will be recontoured to blend as nearly as possible with the natural topography. This includes removing all berms and refilling all cuts.
- e. The stockpiled topsoil will be spread evenly over the disturbed area. All disturbed areas will be ripped 12 inches deep with the contour.
- f. Water bars will be built as follows to control erosion.

<u>Grade</u>	<u>Spacing</u>
2%	Every 200 feet
2-4%	Every 100 feet
4-5%	Every 75 feet
5+%	Every 50 feet

- g. Seed will be broadcast between October 1 and February 28 with the following prescription. A harrow or similar implement will be dragged over the area to assure seed cover.

_____	1bs/acre Indian ricegrass (<u>Oryzopsis hymenoides</u>)
_____	1bs/acre Galleta (<u>Hilaria jamesii</u>)
<u>6</u>	1bs/acre crested wheatgrass (<u>Agropyron desertorum</u>)
_____	1bs/acre Western wheatgrass (<u>Agropyron smithii</u>)
_____	1bs/acre Alkali sacaton (<u>Sporobolus airoides</u>)
_____	1bs/acre Sand dropseed (<u>Sporobolus cryptandrus</u>)
<u>3</u>	1bs/acre Fourwing saltbush (<u>Atriplex canescens</u>)
_____	1bs/acre Shadscale (<u>Atriplex confertifolia</u>)
_____	1bs/acre Green ephedra (<u>Ephedra viridis</u>)
_____	1bs/acre Cliffrose (<u>Cowania mexicana</u>)
<u>2</u>	1bs/acre Desert bitterbrush (<u>Purshia glandulosa</u>)
_____	1bs/acre Winterfat (<u>Eurotia lanata</u>)

_____ lbs/acre Globemallow (Sphaeralcea ambigua)
_____ lbs/acre Wild sunflower (Helianthus annuus)
_____ lbs/acre

- h. After seeding is complete, the stockpiled trees will be scattered evenly over the disturbed areas. The access will be blocked to prevent vehicular access.
 - i. The reserve pit and the portion of the location and access road not needed for production or production facilities will be reclaimed as described in the reclamation section. Enough topsoil will be kept to reclaim the remainder of the location at a future date. This remaining stockpile of topsoil will be seeded in place using the prescribed seed mixture.
11. Surface Ownership: BLM
Mineral Ownership: Federal
12. Other Information: Disturbed areas will be monitored for archeology during initial blading of access and pad area.

There will be no change from the proposed drilling and/or work-over program without prior approval from the District Manager. Safe drilling and operating practices must be used. All wells, whether drilling, producing, suspended, or abandoned will be identified in accordance with 43 CFR 3162.2.

"Sundry Notice and Report on Wells" (Form 3160-5) will be filed and approval for all changes of plans and other operations in accordance with 43 CFR 3164.

The dirt contractor will be provided with an approved copy of the surface use plan.

If subsurface cultural materials are exposed during construction, work in the spot will stop immediately and the San Juan Resource Area Office will be contacted. All people who are in the area will be informed by the operator/holder that they are subject to prosecution for disturbing archeological sites or picking up artifacts. Salvage or excavation of identified archeological sites will be done by a BLM approved archeologist only if damage occurs.

This permit will be valid for a period of one year from the date of approval. After permit termination a new application will be filed for approval for any future operations.

Your contact with the District Office is: Steve Jones
Office Phone: (801) 259-6111, Address: P. O. Box 970, Moab, UT 84532

Resource Area Manager's address and contacts:
Address: P. O. Box 7, Monticello, UT 84532

Your contact is: Richard McClure
Office Phone: (801) 587-2141

13. Lessee's or Operator's Representation and Certification

Representative

Name: Fred Schneider
Address: P. O. Box 2690, Cody, Wyoming 82414
Phone No.: (307) 587-4961

Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Marathon Oil Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

10/15/87 RPM Regulatory Coordinator
Date Name and Title

ON-SITE

DATE: September 29, 1987

PARTICIPANTS:

<u>Jim Perkins & Lou Jobe - Surveyors</u>	<u>Bob Coleman - Marathon</u>
<u>Patrick Harden - Archeologist</u>	<u>Joe Icenogle - Marathon</u>
<u>Howard Hughes - Dirt Contractor</u>	<u>Marvin Blakesley - Marathon</u>
<u>Richard McClure - BLM</u>	<u>Frank Krugh - Marathon</u>
<u>Jim VanGilder - Marathon</u>	<u>Jim Barto - Marathon</u>



Marathon Oil Company

P.O. Box 2690
Cody, Wyoming 82414
Telephone 307/587-4951

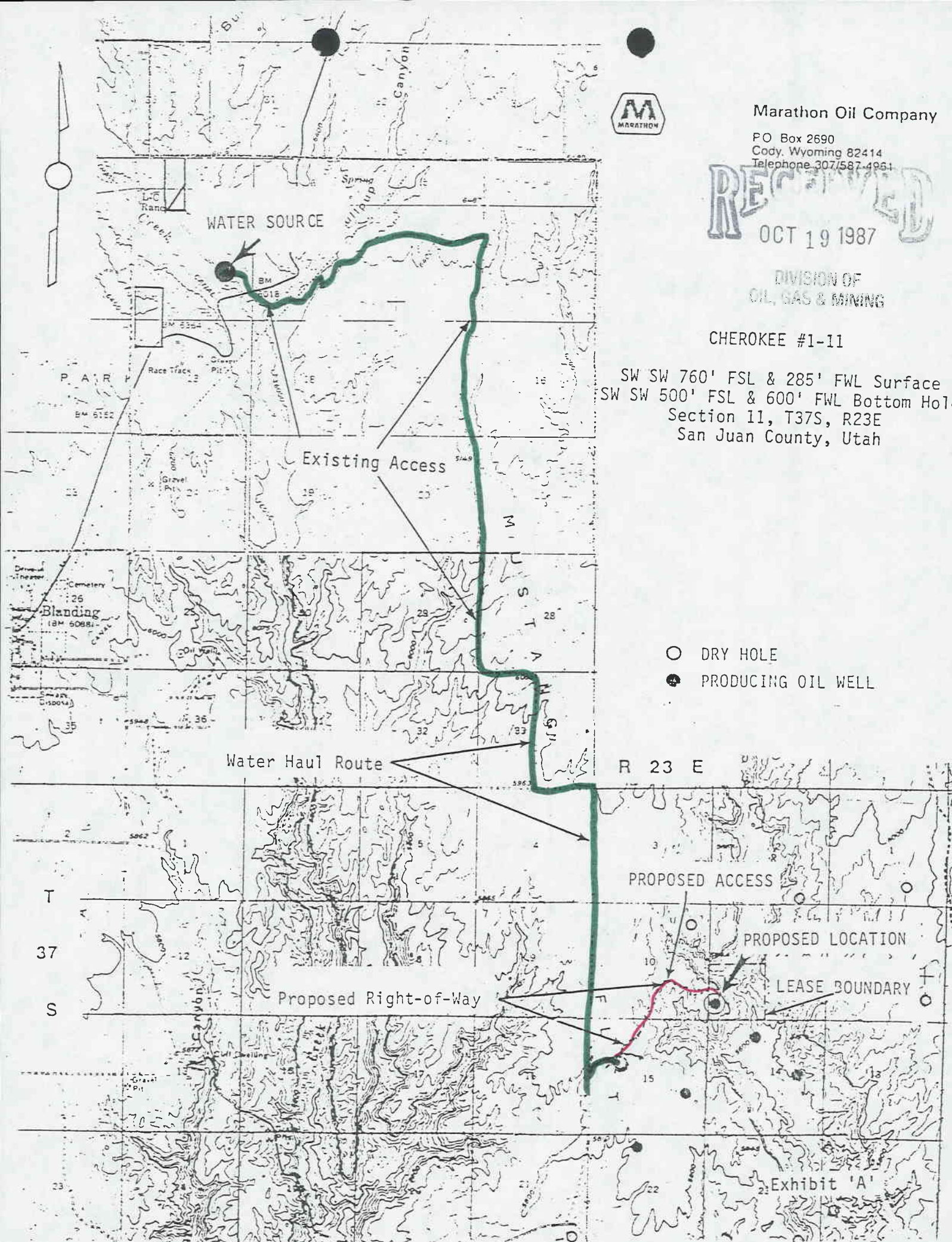
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OCT 19 1987

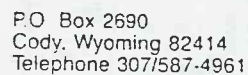
DIVISION OF
OIL, GAS & MINING

CHEROKEE #1-11

SW SW 760' FSL & 285' FWL Surface
SW SW 500' FSL & 600' FWL Bottom Hole
Section 11, T37S, R23E
San Juan County, Utah

- DRY HOLE
- PRODUCING OIL WELL





SW SW 760' FSL & 285' FWL Surface
SW SW 500' FSL & 600' FWL Bottom Hole
Section 11, T37S, R23E
San Juan County, Utah

DIVISION OF OIL, GAS & MINING

○ DRY HOLE
● PRODUCING OIL WELL

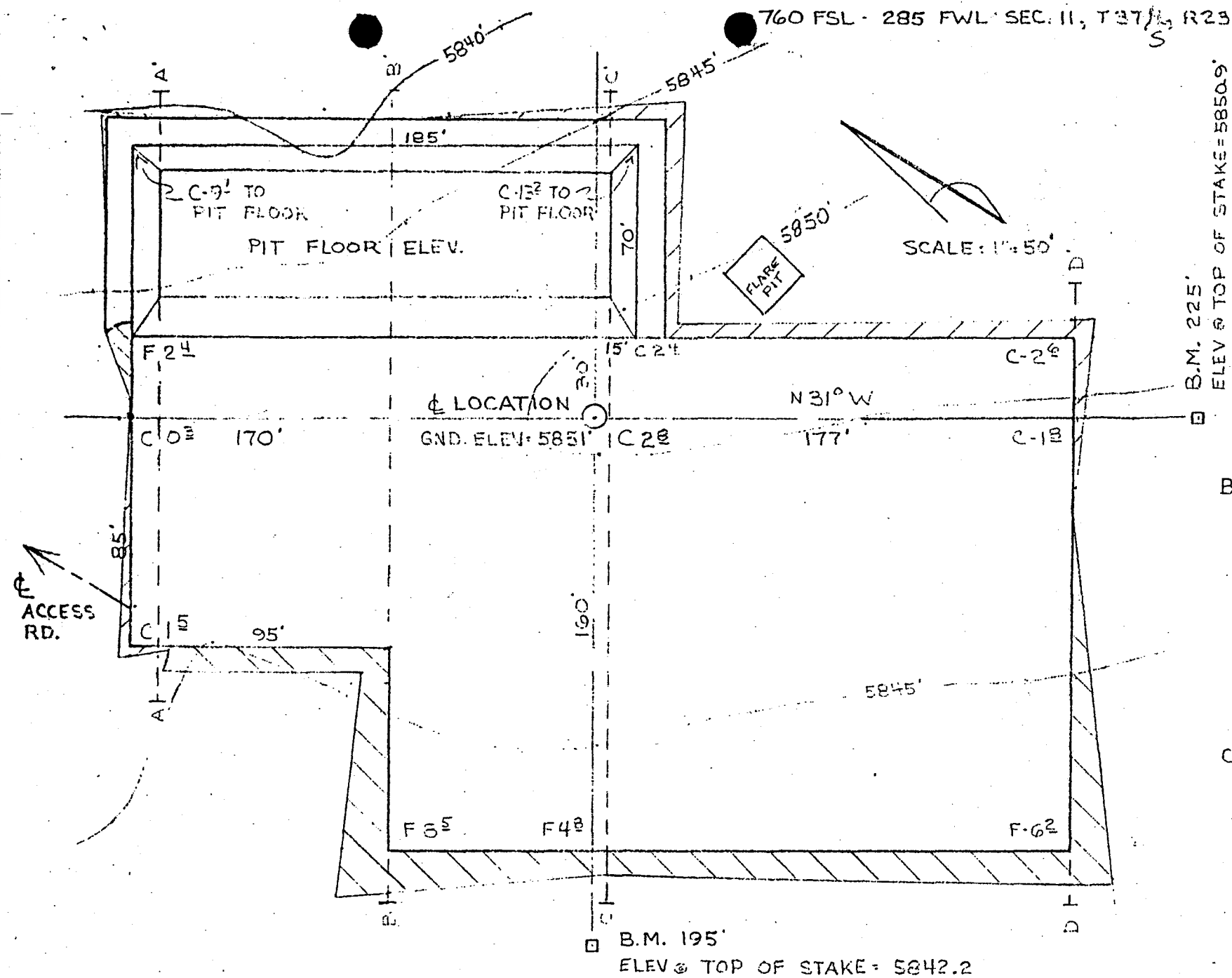
PROPOSED ACCESS

PROPOSED LOCATION

LEASE BOUNDARY

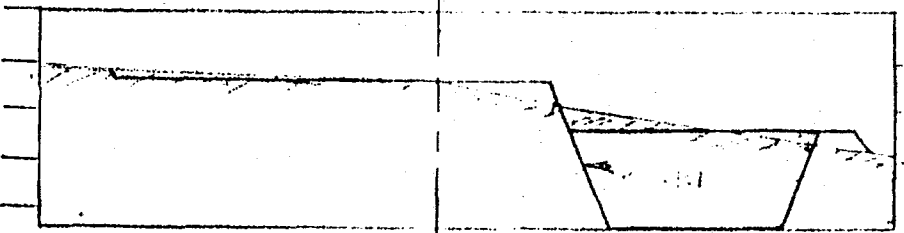
Exhibit 'C'

HORIZONTAL SCALE: 1" = 50' - VERTICAL SCALE: 1" = 20'

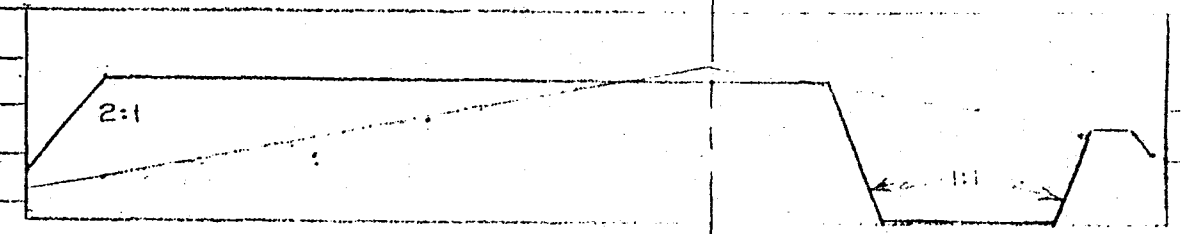


B.M. 225' ELEV @ TOP OF STAKE = 5850.9

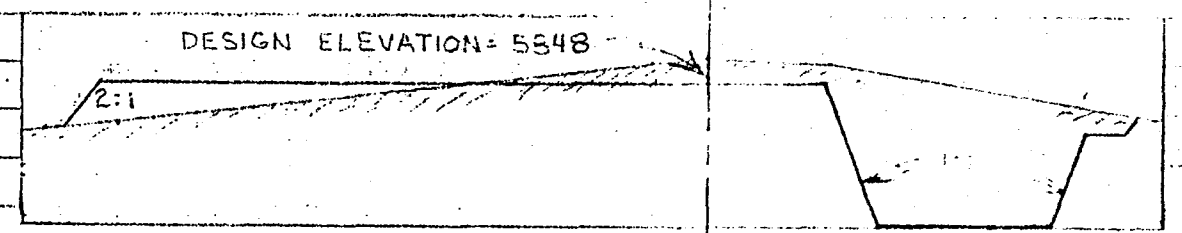
5850
A 5845
5840
5835



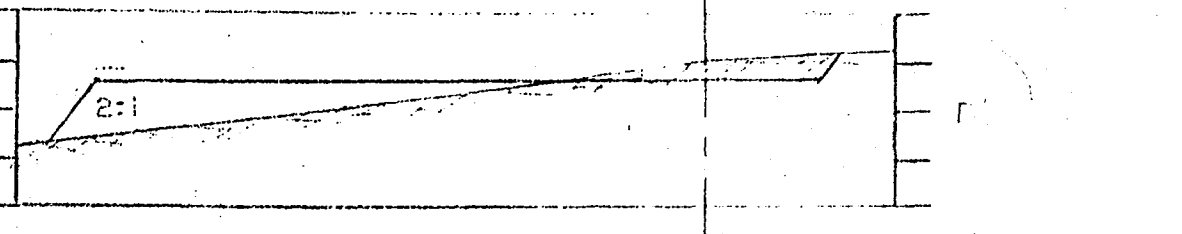
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B 5845
5840
5835



5850
C 5845
5840
5835



5850
D 5845
5840
5835



VOLUMES

TOTAL CUT = 6,152 y³ TOTAL FILL = 3,535 y³
TOP SOIL = 551 y³ WASTE = 2,062 y³
RESERVE PIT CAPACITY = 17,142 BARRELS

Exhibit 'D'

Marathon Oil Co.
Cody, Wyoming

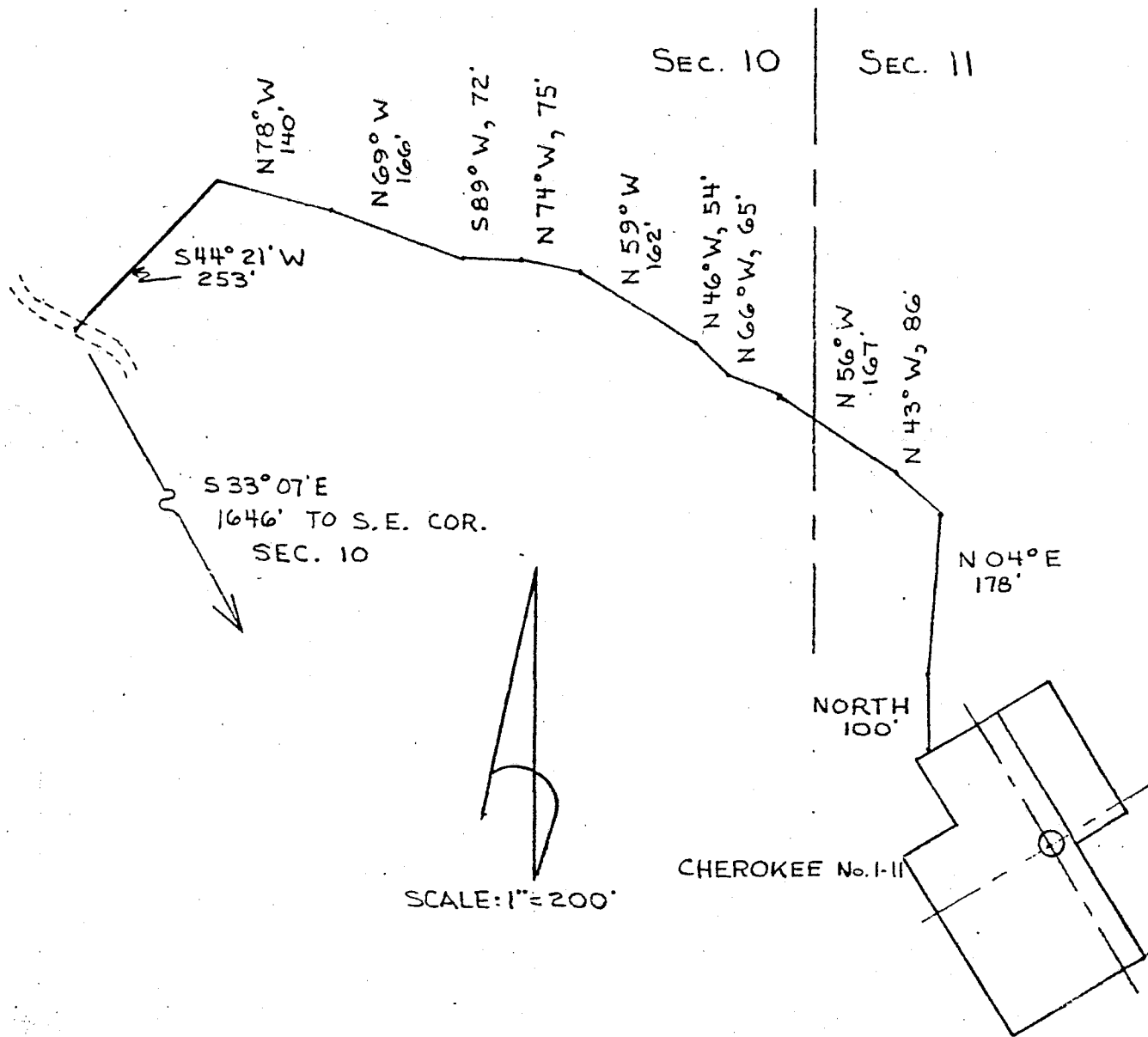
Well Site Plan
Cherokee No. 1-11
Sec. 11, T37S, R23E, S.L.M.
San Juan County, Utah

Clark-Reed & Assoc. Sept. 30, 1987
Durango, Colorado # 87019

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DIVISION OF
OIL, GAS & MINING

CHEROKEE No. 1-11
ACCESS ROAD

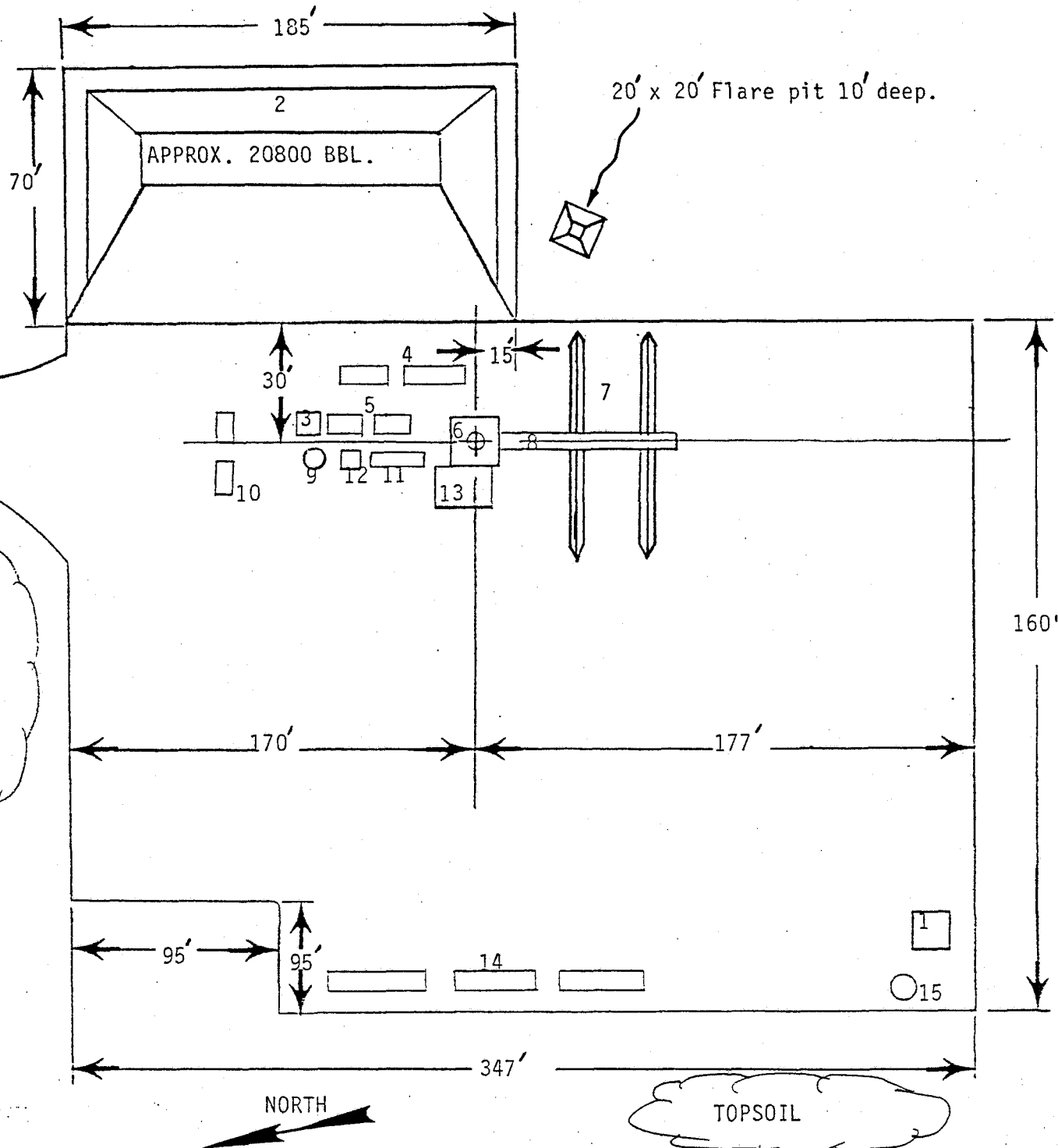


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OCT 19 1987

DIVISION OF
OIL, GAS & MINING

Marathon Oil Co. Cody, Wyoming
Cherokee No. 1-11 Access Rd.
Clark-Reed & Assoc. #87019

Exhibit 'E'



- 1 TRASH CAGE
- 2 RESERVE PIT
- 3 MUD HOUSE
- 4 CIRCULATING MUD TANKS
- 5 PUMP
- 6 DRILLING RIG
- 7 PIPE RACKS
- 8 CATWALK

- 9 WIRE ROPE REEL
- 10 FUEL TANK
- 11 WATER TANK
- 12 GENERATOR
- 13 DOG HOUSE
- 14 TRAILER HOUSE
- 15 CHEMICAL TOILET



Marathon Oil Company

P.O. Box 2690
Cody, Wyoming 82414
Telephone 307/587-4961

RECEIVED

OCT 19 1987

DIVISION OF
OIL, GAS & MINING

Exhibit 'J'

SAN JUAN COUNTY ROAD DEPARTMENT

Application for Right-of-Way Encroachment Permit

DATE: October 2, 1987

TO: Road Supervisor
San Juan County Road Department

Application is hereby made by: (1) Marathon Oil Company

Address (2) P. O. Box 2690, Cody, Wyoming 82414

Telephone Number: (307) 587-4961 for permission to do the following:

(3) To utilize San Juan County roads and rights-of-ways during the construction, drilling and maintenance of our Cherokee #1-11 well located in Section 11, T37S, R23E, San Juan County, Utah

(4) Location: From north of Blanding, Utah Section 7, T36S, R22E leading 2.5 miles easterly then turning south approximately 10 miles to Section 15, T37S R23E where new access will start.

City --- County San Juan State Utah

or U. S. Highway No. Mustang Flats Milepost No. Not Available

in accordance with the attached plan. (5)

(6) Construction will begin on or about November 1, 1987

and will be completed on or before December 31, 1987

If the proposed installation requires breaking of the pavement, give the following information:

- a. Type of pavement: N/A
- b. The opening to be made will be N/A feet long
by N/A feet wide and N/A feet deep.
- c. A bond in the amount of \$ N/A has been posted with
--- Telephone No. ---

to run of a term of three (3) years after completion of work to guarantee satisfactory performance.

(7) If this permit is granted, we agree to comply with all conditions, restriction, and regulations as contained in the "Regulations for the Control nad Protection of State Highway Rights-of-Way", approved by the Utah State Road Commission on October 8, 1962, and all revisions thereto or Regulations adopted by the San Juan County Commission.

(8) In approving this application and locations of utilities, and effort will be made to approve only locations that will not be effected in the event that San Juan County changes the roadway. But, in situations in which the utility has to be moved, this moving shall be done by the utility company or paid for by the company.

(9) For any and all applications requesting authority to Vibroseise, applicants shall:

- Provide map showing where vibroseising will take place.
- Agree to repair any damages or replace any property damaged.
- Take full responsibility or proper flagging and traffic control.

d. Agree that Vibroseising done in the area of dirt roads shall done on the dirt road rather than in the bar ditch to minimize damage.

e. Provide a schedule of the planned work and estimated dates of completion.

f. Attach written permission form all adjacent fee-title owners.

g. Tha San Juan County Commission has authorized the San Juan County Road Superintendent (or his Assignees) to issue permits.

(10) San Juan County can only grant permission to the extent that the County has the aurohrity to do so and the permission granted hereunder is limited to the interest of authority actually owned by San Juan County and no warranties of ownership or authority to grant permission is expressed or implied by the granting of this permit.

R. M. Melan
BY:

Regulatory Coordinator
TITLE

To be filled in by Road Supervisor.

(1) Permit should be granted _____

Permit should not be granted _____

(2) Additional requirements which should be imposed.

ROAD SUPERVISOR

INSTRUCTIONS

(1) *Application for this permit should be made in duplicate by whoever will actually do the work whether it be the owner or a contractor.

(2) Mailing address of applicant.

(3) State fully and completely the type or installaion, type of construction, width, thickness, drainage data, etc., where applicable. If pole line, give the following information: number of poles, total length of line, type of wire, character of service, vertical clearance over roadway, and voltage of power line.

(4) If pipe line or buried cable, give the follwing information: Type of service, size and length of line, depth of trench, kind of pipe, (sewer, gas, oil, water supply, etc.) or conduit, and if pipe is to be driven or if pavement will be broken. All fluid lines requires encasement with suitable material. The size and length of encasement shall be satisfactory to the State Department of Transportation, San Juan County Road Supervisor or his agent.

(5) Give distance from some geographical point such as intersecting highways, city, or coporate limits. Give city, county, and state or U. S. route number.

(6) Attach two (2) copies of a plan showing proposed location of structures with reference ot pavement and right-of-way lines. If installation crosses the highway, show cross section of present roadway and proposed installation.

(7) Give anticipated dates for beginning and for completion of proposed installation.

Note: A fee of five (5) dollars will be charged for all Right-of-Way Encroachments Permits, except those obtained for pole lines, and buried cable lines. This Permit fee, where applicable, should be submitted with the application. The costs of inspection are included in the Right-of-Way Encroachment Permit fee, except for pole lines, pipe lines, and buried cable lines which shall be billed for the inspection.



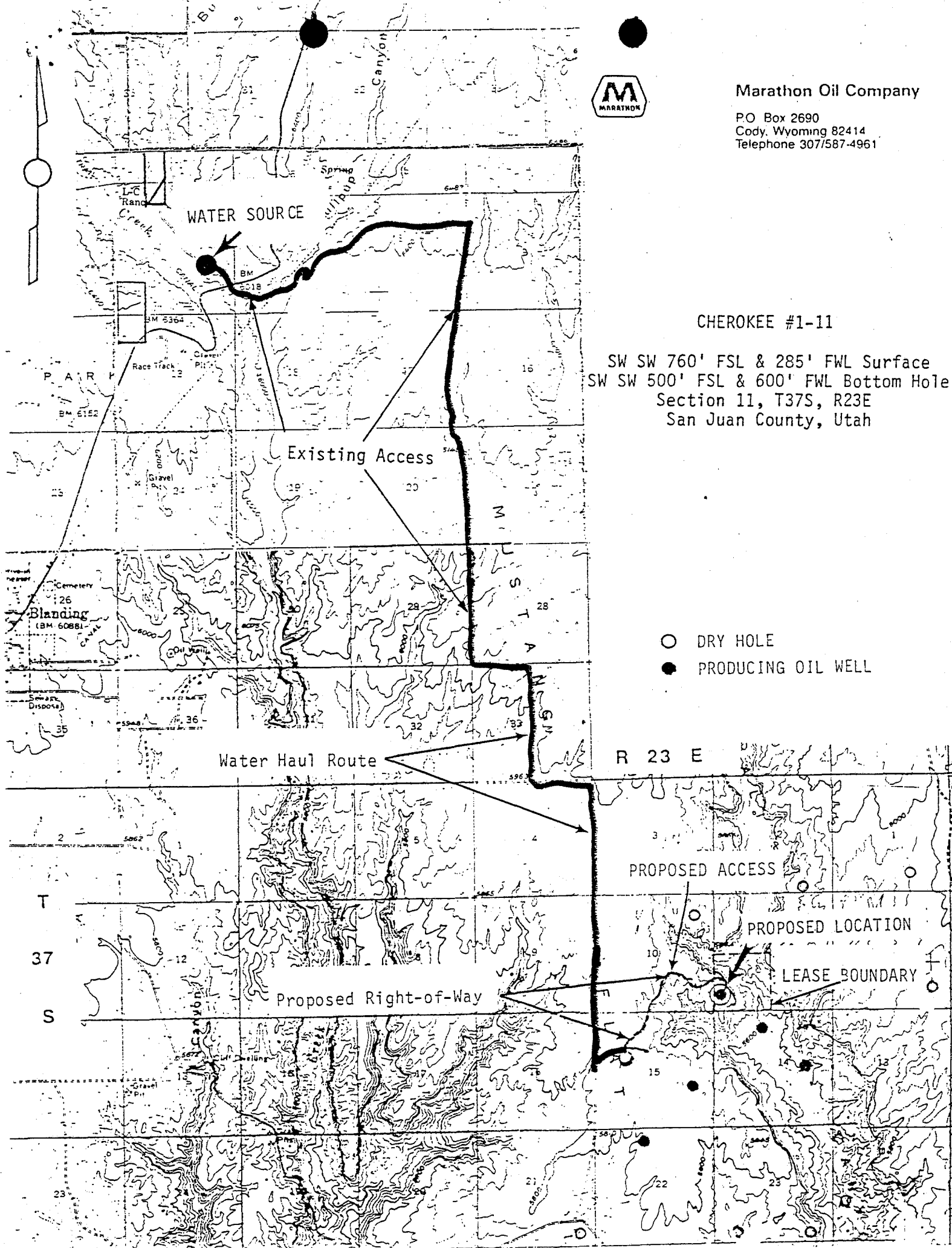
Marathon Oil Company

P.O. Box 2690
Cody, Wyoming 82414
Telephone 307/587-4961

CHEROKEE #1-11

SW SW 760' FSL & 285' FWL Surface
SW SW 500' FSL & 600' FWL Bottom Hole
Section 11, T37S, R23E
San Juan County, Utah

- DRY HOLE
- PRODUCING OIL WELL



TEMPORARY

Application No. _____

APPLICATION TO APPROPRIATE WATER**STATE OF UTAH**

NOTE:—The information given in the following blanks should be free from explanatory matter, but when necessary, a complete supplementary statement should be made on the following page under the heading "Explanatory."

For the purpose of acquiring the right to use a portion of the unappropriated water of the State of Utah, for uses indicated by (X) in the proper box or boxes, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of the Laws of Utah.

1. Irrigation ☐ Domestic ☐ Stockwatering ☐ Municipal ☐ Power ☐ Mining ☐ Other Uses ☒

2. The name of the applicant is Marathon Oil Company

3. The Post Office address of the applicant is P. O. Box 2690, Cody, Wyoming 82414

4. The quantity of water to be appropriated _____ second-feet and/or 3.5 acre-feet

5. The water is to be used for Oil Well Drilling from Nov. 1, 1987 to Nov. 1, 1988
(Major Purpose) (Month) (Day) (Month) (Day)

other use period _____ from _____ to _____
(Minor Purpose) (Month) (Day) (Month) (Day)

and stored each year (if stored) from _____ to _____
(Month) (Day) (Month) (Day)

6. The drainage area to which the direct source of supply belongs is _____
(Leave Blank)

7. The direct source of supply is * Recapture Reservoir NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 12, T36S, R22E
(Name of stream or other source)

which is tributary to _____, tributary to _____

*Note.—Where water is to be diverted from a well, a tunnel, or drain, the source should be designated as "Underground Water" in the first space and the remaining spaces should be left blank. If the source is a stream, a spring, a spring area, or a drain, so indicate in the first space, giving its name, if named, and in the remaining spaces, designate the stream channels to which it is tributary, even though the water may sink, evaporate, or be diverted before reaching said channels. If water from a spring flows in a natural surface channel before being diverted, the direct source should be designated as a stream and not a spring.

8. The point of diversion from the source is in San Juan County, situated at a point * NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 12, T36S, R22E

*Note.—The point of diversion must be located definitely by course and distance or by giving the distances north or south, and east or west with reference to a United States land survey corner or United States mineral monument, if within a distance of six miles of either, or if at a greater distance, to some prominent and permanent natural object. No application will be received for filing in which the point of diversion is not defined definitely.

9. The diverting and carrying works will consist of trucks traveling to Recapture Reservoir
and pumping water from the Reservoir

10. If water is to be stored, give capacity of reservoir in acre-feet _____ height of dam _____
area inundated in acres _____ legal subdivision of area inundated _____

11. If application is for irrigation purposes, the legal subdivisions of the area irrigated are as follows:

_____ Total _____ Acres

12. Is the land owned by the applicant? Yes _____ No X If "No," explain on page 2.

13. Is this water to be used supplementally with other water rights? Yes _____ No _____
If "yes," identify other water rights on page 2.

14. If application is for power purposes, describe type of plant, size and rated capacity. _____

15. If application is for mining, the water will be used in _____ Mining District at
the _____ mine, where the following ores are mined _____

16. If application is for stockwatering purposes, number and kind of stock watered _____

17. If application is for domestic purposes, number of persons _____, or families _____

18. If application is for municipal purposes, name of municipality _____

19. If application is for other uses, include general description of proposed uses _____

20. Give place of use by legal subdivision of the United States Land Survey for all uses described in paragraphs 14 to 19, incl. SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 11, T37S, R23E (Cherokee Prospect)

21. The use of water as set forth in this application will consume 3.5 second-feet and/or acre-feet of water and _____ second feet and/ or acre feet will be returned to the natural stream or source at a point described as follows: _____

EXPLANATORY

The following additional facts are set forth in order to define more clearly the full purpose of the proposed application:

Paragraph #8 and #9 - Recapture Reservoir, San Juan County NE 1/4 SE 1/4 of Section 12, T36S, R22E. The water will be sucked directly from the reservoir. No additional blockage or dam will be constructed.

*Refer to the attached map for further detail of water source and the location of the proposed well where the water will be used.

(Use page 4 if additional explanatory is needed.)

The quantity of water sought to be appropriated is limited to that which can be beneficially used for the purpose herein described

R P Melan

Regulatory Coordinator

Signature of Applicant*

*If applicant is a corporation or other organization, signature must be the name of such corporation or organization by its proper officer, or in the name of the partnership by one of the partners, and the names of the other partners shall be listed. If a corporation or partnership, the affidavit below need not be filled in. If there is more than one applicant, a power of attorney, authorizing one to act for all, should accompany the Application.

DECLARATION OF CITIZENSHIP

STATE OF UTAH, } ss
County of..... }

On the day of, 19....., personally appeared before me, a notary public for the State of Utah, the above applicant who, on oath, declared that he is a citizen of the United States, or has declared his intention to become such a citizen.

My commission expires:

(SEAL)

Notary Public

FEEES FOR APPLICATIONS TO APPROPRIATE WATER IN UTAH

Flow rate — c.f.s.	Cost	
0.0 to 0.1	\$ 15.00	
over 0.1 to 0.5	30.00	
over 0.5 to 1.0	45.00	
over 1.0 to 15.0	45.00	plus \$7.50 for each cfs above the first cubic
over 15.0	150.00	foot per second.

Storage — acre-feet		
0 to 20	22.50	
over 20 to 500	45.00	
over 500 to 7500	45.00	plus \$7.50 for each 500 a.f. above the first
over 7500	150.00	500 acre feet.

(This section is not to be filled in by applicant)

STATE ENGINEER'S ENDORSEMENTS

1. Application received ^{by mail} over counter in State Engineer's office by
2. Priority of Application brought down to, on account of
3. Application fee, \$....., received by Rec. No.....
4. Application microfilmed by Roll No.
5. Indexed by Platted by
6. Application examined by
7. Application returned, or corrected by office
8. Corrected Application resubmitted ^{by mail} over counter to State Engineer's office.
9. Application approved for advertisement by
10. Notice to water users prepared by
11. Publication began; was completed
- Notice published in
12. Proof slips checked by
13. Application protested by
14. Publisher paid by M.E.V. No.
15. Hearing held by
16. Field examination by
17. Application designated for ^{approval} rejection
18. Application copied or photostated by proofread by
19. Application ^{approved} rejected
20. Conditions:

This Application is approved, subject to prior rights, as follows:

- a. Actual construction work shall be diligently prosecuted to completion.
- b. Proof of Appropriation shall be submitted to the State Engineer's office by
- c.

State Engineer

21. Time for making Proof of Appropriation extended to
22. Proof of Appropriation submitted.
23. Certificate of Appropriation. No. issued

TEMPORARY

Application No.

NOTICE TO APPLICANT

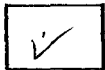
All waters in this state, whether above or under the ground, are the property of the public, subject to all existing rights to the use thereof. No appropriation of the unappropriated public water may be made and no rights to the use thereof shall be recognized except Application for such appropriation first be made to the State Engineer.

The approval of this Application is not a Certificate of Appropriation. It is merely your authority to begin construction work, which must be prosecuted diligently to completion. To secure a Certificate of Appropriation under this Application, Proof of Appropriation must be submitted within the time limit allowed by the State Engineer. The amount of water for which Certificate will be issued will depend upon the amount of water actually put to a beneficial use, not to exceed, however, the amount of water specified in this Application. Proof of Appropriation must be made in accordance with the requirements of the law. For further information, write the State Engineer.

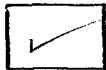
102602

OPERATOR Marathon Oil Co. DATE 10-20-87WELL NAME Cherokee 1-11SEC SWSW11 T 37S R 23E COUNTY San Juan43-037-31357
API NUMBERFed.
TYPE OF LEASE

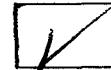
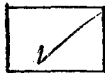
CHECK OFF:



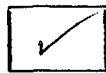
PLAT



BOND

NEAREST
WELL

LEASE



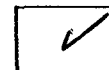
FIELD

POTASH OR
OIL SHALE

PROCESSING COMMENTS:

No other well in Sec. 11Need water permit

APPROVAL LETTER:

SPACING: ☐ R615-2-3 _____ UNIT

R615-3-2

_____
CAUSE NO. & DATE

R615-3-3

STIPULATIONS:

1- Water2- Directional survey



STATE OF UTAH
NATURAL RESOURCES
Oil, Gas & Mining

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Dianne R. Nielson, Ph.D., Division Director

335 W. North Temple • 3 Triad Center • Suite 350 • Salt Lake City, UT 84180-1203 • 801-538-5340

October 22, 1987

Marathon Oil Company
P. O. Box 2690
Cody, Wyoming 82414

Gentlemen:

Re: Cherokee 1-11 - SW SW Sec. 11, T. 37S, R. 23E - San Juan County
(Surf.) 760' FSL, 285' FWL, (BHL) 500' FSL, 600' FWL

Approval to drill the referenced well is hereby granted in accordance with Rule R615-3-2, Oil and Gas Conservation General Rules, subject to the following stipulations:

1. Prior to commencement of drilling, receipt by the Division of evidence providing assurance of an adequate and approved supply of water as required by Chapter 3, Title 73, Utah Code Annotated.
2. Submittal of directional drilling data upon completion of drilling operations to properly ascertain the location of the producing formation.

In addition, the following actions are necessary to fully comply with this approval:

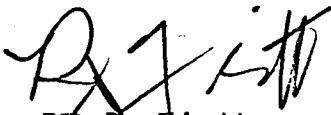
1. Spudding notification to the Division within 24 hours after drilling operations commence.
2. Submittal of an Entity Action Form to the Division within five working days of the time that the well is spudded or a change in operations or interests necessitates a change in entity status.
3. Submittal to the Division of completed Form OGC-8-X, Report of Water Encountered During Drilling.

Page 2
Marathon Oil Company
Cherokee 1-11
October 22, 1987

4. Prompt notification to the Division should you determine that it is necessary to plug and abandon this well. Notify John R. Baza, Petroleum Engineer, (Office) (801) 538-5340, (Home) 298-7695, or R. J. Firth, Associate Director, (Home) 571-6068.
5. Compliance with the requirements of Rule R615-3-22, Gas Flaring or Venting, Oil and Gas Conservation General Rules.
6. Prior to commencement of the proposed drilling operations, plans for toilet facilities and the disposal of sanitary waste at the drill site shall be submitted to the local health department having jurisdiction. Any such drilling operations and any subsequent well operations must be conducted in accordance with applicable state and local health department regulations. A list of all local health departments and copies of applicable regulations are available from the Division of Environmental Health, Bureau of General Sanitation, telephone (801) 538-6121.
7. This approval shall expire one (1) year after date of issuance unless substantial and continuous operation is underway or an application for an extension is made prior to the approval expiration date.

The API number assigned to this well is 43-037-31357.

Sincerely,



R. J. Firth
Associate Director, Oil & Gas

as
Enclosures
cc: Branch of Fluid Minerals
D. R. Nielson
8159T

as

Rocky Mountain Region
Production United States



**Marathon
Oil Company**

P.O. Box 2690
Cody, Wyoming 82414
Telephone 307/587-4961

110430

October 28, 1987

~~CONFIDENTIAL~~
O.E.M.

State of Utah
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

RE: "Confidential Status" of the proposed Cherokee #1-11 well.

Gentlemen:

Marathon Oil Company requests that all information concerning the proposed Cherokee #1-11 well, located in SWSW of Section 11, Township 37 South, Range 23 East, San Juan County, Utah be kept "Confidential".

Your cooperation in this matter would be greatly appreciated.

Sincerely,

MARATHON OIL COMPANY

R.P. Meabon by FMK

R.P. Meabon
Regulatory Coordinator
Rocky Mountain Region

RPM/FMK:kjw

cc: M. Merritt - Casper

~~CONFIDENTIAL~~
O.E.M.

RECEIVED
OCT 30 1987

DIVISION OF
OIL, GAS & MINING

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☒

GAS
WELL ☐

OTHER

SINGLE
ZONE

MULTIPLE
ZONE ☒

2. NAME OF OPERATOR

Marathon Oil Company

3. ADDRESS OF OPERATOR

P. O. Box 2690, Cody, Wyoming 82414

DIVISION OF OIL

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)

At surface

SW SW 760' FSL & 285' FWL

At proposed prod. zone

SW SW 500' FSL & 600' FWL

43-037-31357

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

Approximately 6.5 miles Southeast of Blanding, Utah

15. DISTANCE FROM PROPOSED*

Surface Location

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT.

(Also to nearest drlg. unit line, if any) 285'

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,

OR APPLIED FOR, ON THIS LEASE, FT.

N/A

16. NO. OF ACRES IN LEASE

160

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

19. PROPOSED DEPTH

6374'

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

5851' GI Before Grading

22. APPROX. DATE WORK WILL START*

ASAP

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	36#	2250'	Sufficient to Surface.
7-7/8"	5-1/2"	15.5#	0-5374'	Sufficient to Surface Casing Shoe.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED

R P McLean

TITLE Regulatory Coordinator

DATE October 15, 1987

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

Is/ A. Lynn Jackson

TITLE

Acting DISTRICT MANAGER

DATE

NOV 05 1987

CONDITIONS OF APPROVAL, IF ANY:

SUBJECT TO RIGHT OF WAY
APPROVAL

CONDITIONS OF APPROVAL ATTACHED
FLARING OR VENTING OF
GAS IS SUBJECT OF NTL 4-A
DATED 1/1/80

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

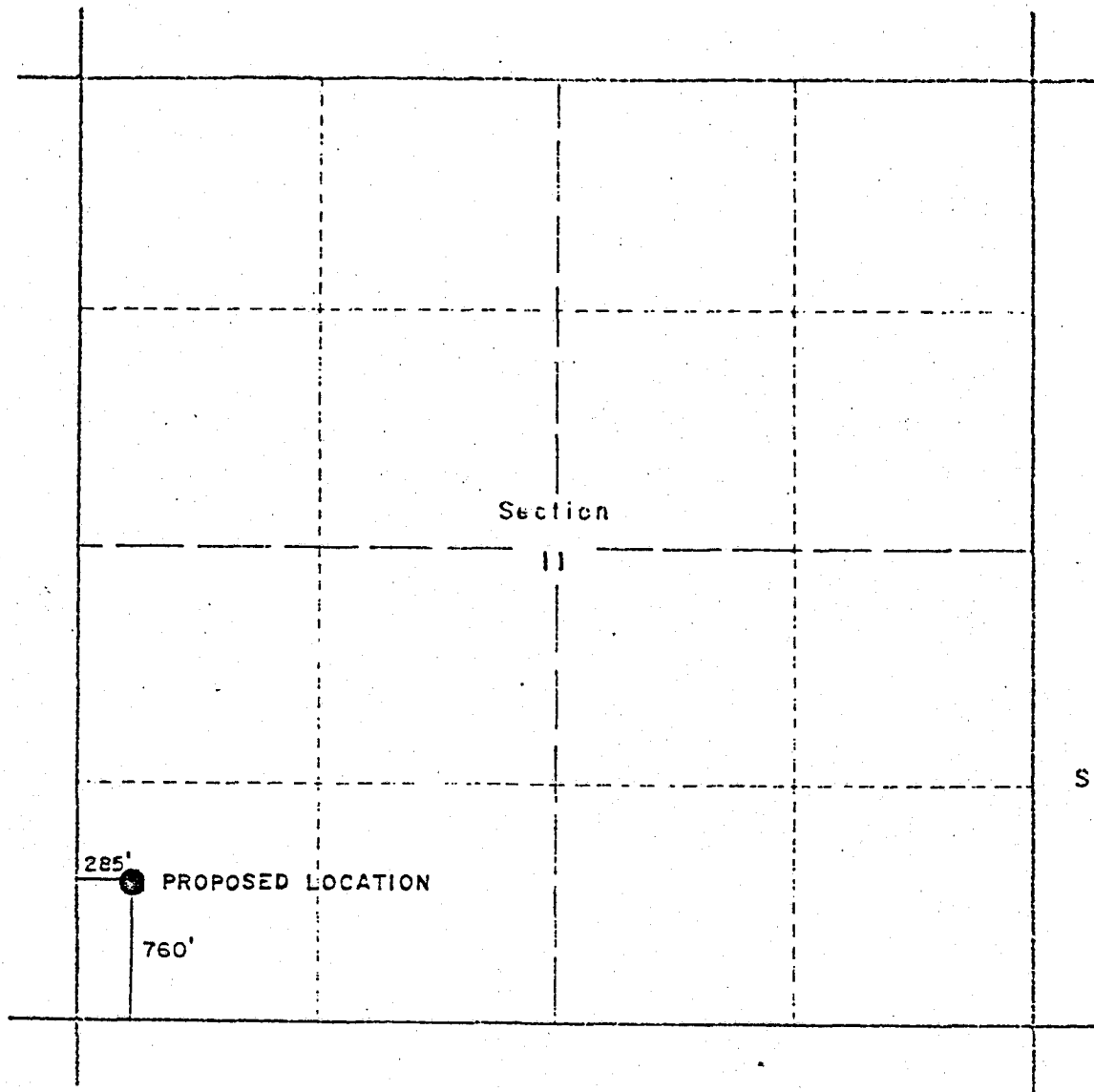
STATE OF UTAH-DOGM

RECEIVED

NOV 9 1987

CONFIDENTIAL
O.G.M.

DEPARTMENT OF OIL
AND GAS



Scale: 1" = 1000'

WELL LOCATION: MARATHON OIL CO. - CHEROKEE NO. 1-II

Located 760 feet North of the South line and 285 feet East of the West line of Section 11

Township 37 SOUTH Range 23 East

SALT LAKE Meridian

Existing ground elevation determined at 5851 feet based on USGS datum.

CONFIDENTIAL
O.G.M.

I hereby certify the above plat represents a survey
made under my supervision and that it is accurate
to the best of my knowledge and belief

Frederick H. Reed

FREDERICK H. REED
Registered Land Surveyor

MARATHON OIL CO.
Cody, Wyoming

WELL LOCATION PLAT
Cherokee No. 1-II
Sec. 11 T37S, R23E
San Juan County, Utah

Exhibit 'B'

CLARK - REED & ASSOC.
Durango, Colorado

DATE: Sept. 30, 1987
FILE NO: 87019

CONFIDENTIAL
RECEIVED
NOV 9 1987

Marathon Oil Company
Well No. Cherokee 1-11
Sec. 11, T. 37 S., R. 23 E.
San Juan County, Utah
Lease U-57881

CONDITIONS OF APPROVAL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

CONFIDENTIAL
O.G.M.

NOV 9 1987

DIVISION OF OIL
GAS & MINING

B. THIRTEEN POINT SURFACE USE PLAN

1. Archaeological sites next to the location and any sites found next to the access during monitoring will be flagged in blue for avoidance.

CONFIDENTIAL
O.G.M.NOTIFICATIONS

Notify the San Juan Resource Area, at (801) 587-2141 for the following:

- 2 days prior to commencement of dirt work, construction or reclamation;
- 1 day prior to spudding;
- 1 day prior to running and cementing surface casing;
- 1 day prior to pressure testing of BOPE and/or surface casing.

Notify the Moab District Office, Branch of Fluid Minerals at (801) 259-6111 for the following:

No well abandonment operations will be commenced without the prior approval of the District Manager. In the case of newly drilled dry holes, and in emergency situations, verbal approval can be obtained by calling the following individuals, in the order listed:

Steven Jones, Petroleum Engineer Office Phone: (801) 259-6111

Home Phone: (801) 259-7404

Lynn Jackson, Chief, Branch of Fluid Minerals

Office Phone: (801) 259-6111

Home Phone: (801) 259-7990

Paul Brown, I&E Coordinator

Office Phone: (801) 259-6111

Home Phone: (801) 259-7018

24 hours advance notice is required for all abandonments.

CONFIDENTIAL
O.G.M.

NOV 9 1987

DIVISION OF OIL
GAS & MINING



STATE OF UTAH
NATURAL RESOURCES
Water Rights

Norman H. Bangerter, Governor
Dee C. Hansen, Executive Director
Robert L. Morgan, State Engineer

1636 West North Temple • Suite 220 • Salt Lake City, UT 84116-3156 • 801-533-6071

November 3, 1987

Marathon Oil Company
P. O. Box 2690
Cody, WY 82414

Dear Applicant:

RE: TEMPORARY APPLICATION
NUMBER 09-1536 (T62924)

Enclosed is a copy of approved Temporary Application Number 09-1536 (T62924). This is your authority to construct your works and to divert the water for the uses described.

While this approved application does give you our permission to divert and use water, it does not grant easements through public or private lands in order to gain access to the source nor to convey the water to the place of use, nor does this approval eliminate the need for such other permits as may be required by this Division or any other agency in implementing your diversion.

This application will expire November 3, 1988, and it is expected that no diversion or use of the water will be done after that date unless another proposal has been made and approved.

Your contact with this office, should you need it, is with the Area Engineer, Mark Page. The telephone number is (801) 637-1303.

Sincerely,

Robert L. Morgan, P.E.
State Engineer

RLM:rc

Encl.: Copy of Approved Temporary Application

NOV 9 1987

DIVISION OF OIL
GAS & MINING

TEMPORARY

Application No. T-62924

09-1536

43.019.31045

WATER RIGHTS 28

SALT LAKE

STATE OF UTAH
WATER RIGHTS

WATER RIGHTS

NOTE: The information given in the following blanks should be free from explanatory matter, but when necessary, a complete supplementary statement should be made on the following page under the heading "Explanatory."

For the purpose of acquiring the right to use a portion of the unappropriated water of the State of Utah, for uses indicated by (X) in the proper box or boxes, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of the Laws of Utah.

111607

1. Irrigation ☐ Domestic ☐ Stockwatering ☐ Municipal ☐ Power ☐ Mining ☐ Other Uses ☒
2. The name of the applicant is Marathon Oil Company
3. The Post Office address of the applicant is P. O. Box 2690, Cody, Wyoming 82414
4. The quantity of water to be appropriated _____ second-feet and/or 3.5 acre-feet
5. The water is to be used for Oil Well Drilling from Nov. 1, 1987 to Nov. 1, 1988
(Major Purpose) (Month) (Day) (Month) (Day)
- other use period _____ from _____ to _____
(Minor Purpose) (Month) (Day) (Month) (Day)
- and stored each year (if stored) from _____ to _____
(Month) (Day) (Month) (Day)
6. The drainage area to which the direct source of supply belongs is _____
(Leave Blank)
7. The direct source of supply is* Recapture Reservoir NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 12, T36S, R22E
(Name of stream or other source)

which is tributary to _____, tributary to _____

*Note.—Where water is to be diverted from a well, a tunnel, or drain, the source should be designated as "Underground Water" in the first space and the remaining spaces should be left blank. If the source is a stream, a spring, a spring area, or a drain, so indicate in the first space, giving its name, if named, and in the remaining spaces, designate the stream channels to which it is tributary, even though the water may sink, evaporate, or be diverted before reaching said channels. If water from a spring flows in a natural surface channel before being diverted, the direct source should be designated as a stream and not a spring.

8. The point of diversion from the source is in San Juan County, situated at a point* NE 1/4 of Section 12, T36S, R22E

North 2132 Ft West 1117 Ft. from SE Corner of Sec. 12, T36S, R22E,
10-28-87 BS 52B 1/2 in

*Note.—The point of diversion must be located definitely by course and distance or by giving the distances north or south, and east or west with reference to a United States land survey corner or United States mineral monument, if within a distance of six miles of either, or if at a greater distance, to some prominent and permanent natural object. No application will be received for filing in which the point of diversion is not defined definitely.

9. The diverting and carrying works will consist of trucks traveling to Recapture Reservoir
and pumping water from the Reservoir

10. If water is to be stored, give capacity of reservoir in acre-feet _____ height of dam _____
area inundated in acres _____ legal subdivision of area inundated _____

11. If application is for irrigation purposes, the legal subdivisions of the area irrigated are as follows:

Total _____ Acres _____

12. Is the land owned by the applicant? Yes _____ No X If "No," explain on page 2.

13. Is this water to be used supplementally with other water rights? Yes _____ No _____
If "yes," identify other water rights on page 2.

14. If application is for power purposes, describe type of plant, size and rated capacity. _____

15. If application is for mining, the water will be used in _____ Mining District at the _____ mine, where the following ores are mined _____.

16. If application is for stockwatering purposes, number and kind of stock watered _____

17. If application is for domestic purposes, number of persons _____, or families _____

18. If application is for municipal purposes, name of municipality _____

19. If application is for other uses, include general description of proposed uses _____

20. Give place of use by legal subdivision of the United States Land Survey for all uses described in paragraphs 14 to 19, incl. SW¹ SW¹ of Section 11, T37S R23E (Cherokee Prospect).

21. The use of water as set forth in this application will consume 3.5 second-feet and/or acre-feet of water and 0 second feet and/ or acre feet will be returned to the natural stream or source at a point described as follows: _____

NOV 9 1987

DIVISION OF OIL

EXPLANATORY

The following additional facts are set forth in order to define more clearly the full purpose of the proposed application:

Paragraph #8 and #9 - Recapture Reservoir, San Juan County NE 1/4 SE 1/4 of Section 12, T36S, R22E. The water will be sucked directly from the reservoir. No additional blockage or dam will be constructed.

*Refer to the attached map for further detail of water source and the location of the proposed well where the water will be used.

CONFIDENTIAL
A.B.M.

CONFIDENTIAL
A.B.M.

(Use page 4 if additional explanatory is needed.)

The quantity of water sought to be appropriated is limited to that which can be beneficially used for the purpose herein described

R P Melan Regulatory Coordinator
Signature of Applicant*

*If applicant is a corporation or other organization, signature must be the name of such corporation or organization by its proper officer, or in the name of the partnership by one of the partners, and the names of the other partners shall be listed. If a corporation or partnership, the affidavit below need not be filled in. If there is more than one applicant, a power of attorney, authorizing one to act for all, should accompany the Application.

DECLARATION OF CITIZENSHIP

STATE OF UTAH, }
County of..... } ss

On the day of, 19....., personally appeared before me, a notary public for the State of Utah, the above applicant who, on oath, declared that he is a citizen of the United States, or has declared his intention to become such a citizen.

My commission expires:

(SEAL)

Notary Public

STATE ENGINEER'S ENDORSEMENT


WATER RIGHT NUMBER: 09 - 1536

APPLICATION NO. T62924

1. October 19, 1987 Application received.
 2. October 29, 1987 Application designated for APPROVAL by MP and KLJ.
 3. Comments:
-
-

Conditions:

This application is hereby APPROVED, dated November 3, 1987, subject to prior rights and this application will expire on November 3, 1988.


Robert L. Morgan, P.E.
State Engineer

CONFIDENTIAL
D.E.R.

file



**Marathon
Oil Company**

P.O. Box 2690
Cody, Wyoming 82414
Telephone 307/587-4961

November 9, 1987

RECEIVED
NOV 11 1987

State of Utah
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

RE: Stipulations Addressed for APD Approval for the Cherokee #1-11 Well.

Gentlemen:

As addressed in your letter granting Marathon Oil Company approval to drill the proposed Cherokee #1-11 well please find a Temporary Water Use Permit attached.

It is our understanding that Marathon will be able to extract water from the source described in the permit as long as a sufficient supply exists.

The local water commissioner will be contacted prior to water use to verify that adequate supplies exist.

If additional information is required feel free to contact this office.

Sincerely,

MARATHON OIL COMPANY

R P Meabon

R. P. Meabon
Regulatory Coordinator
Rocky Mountain Region

RPM/FMK/rrm

Attachment

RECEIVED

NOV - 9 1987

DIVISION OF OIL
& GAS MINING

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug a well. Use "APPLICATION FOR PERMIT" for such purposes.)

1. OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-57881 <i>Orl.</i>	
2. NAME OF OPERATOR Marathon Oil Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME 122902	
3. ADDRESS OF OPERATOR P. O. Box 2690, Cody, Wyoming 82414		7. UNIT AGREEMENT NAME ---	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface SWSW 760' FSL & 285' FWL		8. FARM OR LEASE NAME Cherokee	
14. PERMIT NO. 43-037-31357		9. WELL NO. 1-11	
15. ELEVATIONS (Show whether DF, RT, GR, etc.)		10. FIELD AND POOL, OR WILDCAT Wildcat	
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 11, T37S, R23E	
		12. COUNTY OR PARISH San Juan	
		13. STATE Utah	

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF ☐
FRACTURE TREAT ☐
SHOOT OR ACIDIZE ☐
REPAIR WELL ☐
(Other) ☐

PULL OR ALTER CASING ☐
MULTIPLE COMPLETE ☐
ABANDON* ☐
CHANGE PLANS ☐

SUBSEQUENT REPORT OF:

WATER SHUT-OFF ☐
FRACTURE TREATMENT ☐
SHOOTING OR ACIDIZING ☐
(Other) Spud

REPAIRING WELL ☐
ALTERING CASING ☐
ABANDONMENT* ☒

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

CONFIDENTIAL

The above referenced well was spudded on December 6, 1987 at 4:00 a.m. by Aztec Rig #124. This was reported to Mr. Rick McClure, BLM Noticello, by Frank Krugh, Marathon Oil Company on December 7, 1987.

BLM-Orla & 3--cc: ^{4006M} ~~WOGES~~-2, WRF, FMK, JLS, WTR, RDT, Title & Contract (Houston)

18. I hereby certify that the foregoing is true and correct

SIGNED R P McClure TITLE Regulatory Coordinator DATE December 7, 1987

(This space for Federal or State office use)

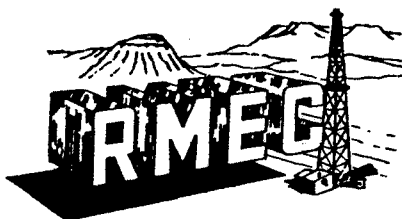
APPROVED BY ACCEPTED TITLE BRANCH OF FLUID MINERALS DATE DEC 15 1987

CONDITIONS OF APPROVAL, IF ANY: MOAB DISTRICT

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

OPERATOR



ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2450 INDUSTRIAL BLVD.

PHONE 243-3044

GRAND JUNCTION, COLORADO 81501

COMPANY MARATHON OIL CO.

WELL NO. #1-11 CHEROKEE FED.

LOCATION SEC. 11, T37S-R23E

CONFIDENTIAL

ZONE OF INTEREST NO. 1

INTERVAL: From 5741 To 5747

DRILL RATE: Abv 7 M/F Thru 4½ M/F Below 6½ M/F

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C ₁	C ₂	C ₃	C ₄	C ₅	OTHER
Before	2 units	495 ppm	108 ppm	tr			
During	1540 units	65250 ppm	5400 ppm	48400 ppm	35100 ppm		
After	393 units	5040 ppm	9240 ppm	3800 ppm	12390 ppm		

Type gas increase: Gradual ☐ Sharp ☒

Gas variation within zone: Steady ☒ Erratic ☐ Increasing ☐ Decreasing ☐

CARBIDE HOLE RATIO: $\frac{\text{GRAMS}}{\text{READING}}$ X Min. in Peak = _____

Sensitivity: Poor ☐ Fair ☐ Good ☒

FLUO: Mineral ☒ Even ☐ Spotty ☐
None ☐ % in total sample _____
Poor ☐
Fair ☐ % in show lithology _____
Good ☐ COLOR: _____

CUT: None ☐ Streaming
Poor ☐ Slow ☒
Fair ☒ Mod ☐
Good ☐ Fast ☐
COLOR: Resid ring _____

STAIN: None ☐ Poor ☐ Fair ☒ Good ☐ Live ☒ Dead ☐ Residue ☐ Even ☐ Spotty ☐ Lt. ☐ Dk. ☒

POROSITY: Poor ☒ Fair ☐ Good ☐ Kind FRAC

LITHOLOGY LS-lt-mbrn, dk gybrn, micxl-gran, vfxl ip, v slty-v shly, grdg to lmy carb
sh, tr calc xl poss from frac

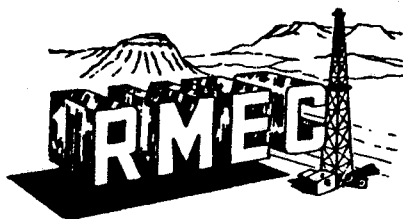
SAMPLE QUALITY fair -good

NOTIFIED Bill DeMis @ 0630 am HRS. DATE: 12/24/87

REMARKS 2 seporate zones #1@ 5741-43 #2 @ 5745-47

NOTE: Shale Shaker bypassed immediatly at peak of kick most of sample lost

ZONE DESCRIBED BY DAVE MEADE



ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2450 INDUSTRIAL BLVD.

PHONE 243-3044

GRAND JUNCTION, COLORADO 81501

COMPANY MARATHON OIL CO

WELL NO. #1-11 CHEROKEE FED.

LOCATION SEC. 11, T37S-R23E

ZONE OF INTEREST NO. 2

CONFIDENTIAL

INTERVAL: From 6168 To 6170

DRILL RATE: Abv 5 M/F Thru 3 1/2 M/F Below 5M/F

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C ₁	C ₂	C ₃	C ₄	C ₅	OTHER
Before	8 units	2970 ppm	504 ppm	220 ppm	195 ppm		
During	72 units	1530 ppm	1980 ppm	660 ppm	390 ppm		
After	32 units	15300 ppm	1080 ppm	440 pp	273 ppm		

Type gas increase: Gradual ☒ Sharp ☐

Gas variation within zone: Steady ☒ Erratic ☐ Increasing ☐ Decreasing ☐

CARBIDE HOLE RATIO: $\frac{\text{GRAMS}}{\text{READING}}$ X Min. in Peak = _____

Sensitivity: Poor ☐ Fair ☐ Good ☒

FLUO: Mineral ☐ Even ☐ Spotty ☐
None ☒ % in total sample _____
Poor ☐
Fair ☐ % in show lithology _____
Good ☐ COLOR: _____

CUT: None ☒ Streaming
Poor ☐ Slow ☐
Fair ☐ Mod ☐
Good ☐ Fast ☐
COLOR: _____

STAIN: None ☒ Poor ☐ Fair ☐ Good ☐ Live ☐ Dead ☐ Residue ☐ Even ☐ Spotty ☐ Lt. ☐ Dk. ☐

POROSITY: Poor ☒ Fair ☐ Good ☐ Kind RR Intxl

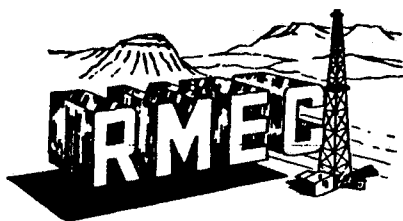
LITHOLOGY DOL-m-dk brn,gybrn,dkgy,crpxl-micxl,vfxl ip,occ lmy,v shly ip,w anhy incl,fos ip
frm-hd bcmg dol sh

SAMPLE QUALITY GOOD

NOTIFIED Bill DeMis @ _____ HRS. DATE: 12/26/87

REMARKS _____

ZONE DESCRIBED BY DAVE MEADE



ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL LOGGING — CORE AND WATER ANALYSIS

2450 INDUSTRIAL BLVD.

PHONE 243-3044

GRAND JUNCTION, COLORADO 81501

COMPANY MARATHON OIL CO.

WELL NO. #1-11 CHEROKEE FED.

LOCATION SEC. 11, T37S-R23E

CONFIDENTIAL

ZONE OF INTEREST NO. 3

INTERVAL: From 6309 To 6312

DRILL RATE: Abv 6½ M/F Thru 2½-3 M/F Below 5½-6M/F

MUD GAS-CHROMATOGRAPH DATA

	TOTAL	C ₁	C ₂	C ₃	C ₄	C ₅	OTHER
Before	25 units	2385ppm	576ppm	264ppm	117ppm		
During	90 units	10800ppm	2520ppm	880ppm	585 ppm		
After	20 units	1710ppm	468ppm	242ppm	88 ppm		

Type gas increase: Gradual ☐ Sharp ☒

Gas variation within zone: Steady ☒ Erratic ☐ Increasing ☐ Decreasing ☐

CARBIDE HOLE RATIO: GRAMS
READING X Min. in Peak = _____

Sensitivity: Poor ☐ Fair ☐ Good ☒

FLUO: Mineral ☐ Even ☐ Spotty ☐
None ☒ % in total sample _____
Poor ☐
Fair ☐ % in show lithology _____
Good ☐ COLOR: _____

CUT: None ☐ Streaming
Poor ☒ Slow ☒
Fair ☐ Mod ☐
Good ☐ Fast ☐
COLOR: fnt resid ring cut

STAIN: None ☐ Poor ☒ Fair ☐ Good ☐ Live ☒ Dead ☐ Residue ☐ Even ☐ Spotty ☒ Lt. ☒ Dk. ☒

POROSITY: Poor ☐ Fair ☒ Good ☐ Kind INTXL VRR PP VUG PRED TT

LITHOLOGY DOL -mbrn, gybrn, micxl-vfxl, gran ip, lmy, shly ip, v sl slty, occ sl fos, anhy ip

frm-mhd

SAMPLE QUALITY good

NOTIFIED Bill Demis @ o600 am HRS. DATE: 12/27/87

REMARKS _____

ZONE DESCRIBED BY DAVE MEADE

BIT RECORD

WELL NAME: <u>#1-11 Cherokee</u>	ELEVATION: <u>GL 5848'</u> <u>KB 5862'</u>
CO. NAME: <u>Marathon Oil Company</u>	SECTION: <u>Section 11, T37S-R23E</u>
CONTRACTOR: <u>Aztec</u> RIG# <u>124</u>	CO. & STATE: <u>San Juan County, Utah</u>
SPUD DATE: _____	T.D. DATE: <u>12-27-87</u>

[illegible]

Rocky Mountain Region
Production United States



**Marathon
Oil Company**

P.O. Box 2690
Cody, Wyoming 82414
Telephone 307/587-4961

011202

January 7, 1988

Dr.
43-037-31357

State of Utah
Division of Oil, Gas and Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Gentlemen:

Enclosed find the required logs submitted to your office for the 1-11 Cherokee Federal, San Juan County, Utah. Please heed the confidential, tight hole status of this well and take the necessary precautions to avoid public release prior to the appropriate date.

MARATHON OIL COMPANY
H. W. Hutchison
H. W. Hutchison
Development Geologist

HWH/sj

Enclosure

RECEIVED
JAN 11 1988

DIVISION OF
OIL, GAS & MINING

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIP
(Other instructions
verse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back or otherwise modify a well.
Use "APPLICATION FOR PERMIT—" for such purposes.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-57881 <i>Dr.</i>	
2. NAME OF OPERATOR Marathon Oil Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME ---	
3. ADDRESS OF OPERATOR P. O. Box 2690, Cody, Wyoming 82414		7. UNIT AGREEMENT NAME ---	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface SWSW 760' FSL & 285' FWL		8. FARM OR LEASE NAME Cherokee	
14. PERMIT NO. 43-037-31357		9. WELL NO. 1-11	
15. ELEVATIONS (Show whether DF, RT, CR, etc.)		10. FIELD AND POOL, OR WILDCAT Wildcat	
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 11, T37S, R23E	
		12. COUNTY OR PARISH San Juan	
		13. STATE Utah	

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF	<input type="checkbox"/>	PCCL OR ALTER CASING	<input type="checkbox"/>
FRACTURE TREAT	<input type="checkbox"/>	MULTIPLE COMPLETE	<input type="checkbox"/>
SHOOT OR ACIDIZE	<input type="checkbox"/>	ABANDON*	<input checked="" type="checkbox"/>
REPAIR WELL	<input type="checkbox"/>	CHANGE PLANS	<input type="checkbox"/>
(Other)	<input type="checkbox"/>		

SUBSEQUENT REPORT OF:

WATER SHUT-OFF	<input type="checkbox"/>	REPAIRING WELL	<input type="checkbox"/>
FRACTURE TREATMENT	<input type="checkbox"/>	ALTERING CASING	<input type="checkbox"/>
SHOOTING OR ACIDIZING	<input type="checkbox"/>	ABANDONMENT*	<input type="checkbox"/>
(Other)	<input type="checkbox"/>		

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

CONFIDENTIAL

Verbal approval to plug and abandon this well in the following manner was acquired from Mr. Lynn Jackson, BLM, Moab, on December 30, 1987.

Plug Placement

Plug #1	6122' to 5670'	150 sacks Class 'B'
Plug #2	5096' to 4780'	110 sacks Class 'B'
Set a retainer at 2177' (130 sacks below & 25 sacks on top)		
	2350' to 2125'	
Plug #4	64' to 14' KB	25 sacks Class 'B'

BLM-Orig & 3--cc: SUDOGM-2, WRF, FMK, WTR, JLS, Title & Contract (Houston)

18. I hereby certify that the foregoing is true and correct

SIGNED RPM

TITLE Regulatory Coordinator

DATE March 22, 1988

(This space for Federal or State office use)

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

ACCEPTED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

DATE: 3-25-88

BY: R. R. Bays

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Marathon Oil Company
Well No. Cherokee 1-11
Sec. 11, T. 37 S., R. 23 E.
San Juan County, Utah
Lease U-57881

CONDITIONS OF APPROVAL

Section V. of Onshore Oil and Gas Order No. 1 requires that operators submit three, separate Sundry Notices (Form 3160-5) in relation to the plugging and abandonment of any jurisdictional well, i.e., a Notice of Intent to Abandon (NIA) as a precursor to the commencement of actual abandonment operations or as a written confirmation of an orally prescribed abandonment program; a Subsequent Report of Abandonment (SRA) reflecting the actual downhole abandonment operations performed, which is to be submitted within 30 days of completing those operations; and, a notice from the operator that the required surface reclamation requirements have been completed and, thus, the site is now ready for inspection. Section V. also states that "Final abandonment shall not be approved until the surface reclamation work required by the the approved drilling permit or approved abandonment notice (NIA) has been completed to the satisfaction of the San Juan Resource Area.

Accordingly, final approval of an abandoned well has two components:

- 1) Satisfactory completion of the approved downhole plugging plan.
- 2) Satisfactory reclamation of the site.

You will therefore be required to submit a Final Abandonment Notice (Sundry Notice - Form 3160-5) when vegetative reclamation is complete. You will not be released from bond liability on this location until such final abandonment has been approved by the Moab District Office.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE*

(See other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

13

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL:		OIL WELL <input type="checkbox"/>	GAS WELL <input type="checkbox"/>	DRY <input checked="" type="checkbox"/>	Other <input type="checkbox"/>			
b. TYPE OF COMPLETION:		NEW WELL <input type="checkbox"/>	WORK OVER <input type="checkbox"/>	DEEP-EN <input type="checkbox"/>	PLUG BACK <input type="checkbox"/>	DIFF. RESVR. <input type="checkbox"/>	Other <input type="checkbox"/>	
2. NAME OF OPERATOR Marathon Oil Company						RECEIVED MAR 24 1988		
3. ADDRESS OF OPERATOR P. O. Box 2690, Cody, Wyoming 82414								
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface SWSW 760' FSL & 285' FWL At top prod. interval reported below SWSW 500' FSL & 600' FWL At total depth								
14. PERMIT NO.		43-037-31357				DATE ISSUED		
15. DATE SPUDDED		16. DATE T.D. REACHED		17. DATE COMPL. (Ready to prod.)		18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD	
12/6/87		12/28/87		P&A'd		5862' KB	5848' GL	
20. TOTAL DEPTH, MD & TVD		21. PLUG. BACK T.D., MD & TVD		22. IF MULTIPLE COMPL., HOW MANY*		23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
6438'		Surface		---		0	6438'	---
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* Plugged & Abandoned							25. WAS DIRECTIONAL SURVEY MADE Yes	
26. TYPE ELECTRIC AND OTHER LOGS RUN FDC-CNL-GR-CAL, DIL-MSFL-GR-CAL-SP, Sonnic-CAL-DIP							27. WAS WELL CORED No	
28. CASING RECORD (Report all strings set in well)								
CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD		AMOUNT PULLED		
9-5/8"	36#	2245'	12-1/4"	365 sacks Class 'B' 35 sacks Top Job		None		
29. LINER RECORD				30. TUBING RECORD				
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	
---	---	---	---	---	---	---	---	
31. PERFORATION RECORD (Interval, size and number) Plugged & Abandoned				32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.				
				DEPTH INTERVAL (MD)		AMOUNT AND KIND OF MATERIAL USED		
				---		---		
33. PRODUCTION								
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Plugged & Abandoned				WELL STATUS (Producing or shut-in) P&A'd		
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO	

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)		

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)						TEST WITNESSED BY		
35. LIST OF ATTACHMENTS								
Page 2 Deviation Survey and Plug Placement.								
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records								
SIGNED <u>R P M. Lala</u>		TITLE <u>Regulatory Coordinator</u>			DATE <u>March 22, 1988</u>			

*(See Instructions and Spaces for Additional Data on Reverse Side)

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

GEOLOGIC MARKERS

38.

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
Honaker Trail	4960'		Shale, Siltstone, Limestone, Sandstone	Honaker Trail	4960'	902'
Upper Ismay	6049'	6230'	Limestone, Shale, Dolomite, Anhydrite	Upper Ismay	6049'	(187')
Lower Ismay	6230'	6273'	Limestone, Shale, Dolomite, Anhydrite	Lower Ismay	6230'	(368')
Desert Creek	6300'	6372'	Shale, Anhydrite, Limestone, Dolomite	Gothic	6273'	(411')
				Desert Creek	6300'	(438')
				Chimney Rock	6372'	(510')
				Akah	6396'	(534')
DIST: BLM-Orig & 2--cc: SUDOGM-2, WRF, FMK, JLS, WTR, Exploration-2, Title & Contract (Houston)-2						

TOP KB = 5862'

Cherokee #1-11

CONFIDENTIAL

Deviation Survey

<u>Depth</u>	<u>Angel</u>	<u>Depth</u>	<u>Angle</u>
100'	1/2°	3503'	5-3/4°
248'	1/4°	3566'	6-1/4°
366'	1/4°	3660'	6-1/4°
613'	3/4°	3690'	6-1/2°
818'	3/4°	3752'	6-3/4°
1030'	3/4°	3845'	6°
1305'	1/4°	3940'	6-1/2°
1552'	1/4°	4097'	5-1/2°
1802'	Misrun	4255'	5-1/2°
1959'	1/4°	4410'	5-3/4°
2241'	3/4°	4627'	9-3/4°
2544'	3/4°	4658'	10-1/4°
2940'	3/4°	4688'	10-3/4°
3002'	1°	4717'	11°
3033'	0°	4800'	10-1/2°
3053'	1°	4885'	10-1/4°
3084'	1-3/4°	5008'	9-1/2°
3113'	2-1/4°	5113'	9-1/4°
3175'	3-3/4°	5285'	8-1/4°
3203'	4°	5442'	7°
3262'	4-3/4°	5661'	5-1/2°
3320'	5-1/2°	5909'	4-3/4°
3382'	5-1/2°	6248'	4°
3442'	5-3/4°		

Plug Placement

Plug #1 6122' to 5670' 150 sacks Class 'B'
 Plug #2 5096' to 4780' 110 sacks Class 'B'
 Set a retainer at 2177' (130 sacks below & 25 sacks on top)
 2350' to 2125'
 Plug #4 64' to 14' KB 25 sacks Class 'B'

RECEIVED
MAR 24 1988

Page 2 of 2

DIVISION OF
OIL, GAS & MINING

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such purposes.)

1. OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. U-57881
2. NAME OF OPERATOR Marathon Oil Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME ---
3. ADDRESS OF OPERATOR P. O. Box 2690, Cody, Wyoming 82414		7. UNIT AGREEMENT NAME ---
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.) At surface SWSW 760' FSL & 285' FWL		8. FARM OR LEASE NAME Cherokee
14. PERMIT NO. 43-037-31357		9. WELL NO. 1-11
15. ELEVATIONS (Show whether DF, RT, GR, etc.)		10. FIELD AND POOL, OR WILDCAT Wildcat
		11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 11, T37S, R23E
		12. COUNTY OR PARISH San Juan
		13. STATE Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF <input type="checkbox"/>	PULL OR ALTER CASING <input type="checkbox"/>	WATER SHUT-OFF <input type="checkbox"/>	REPAIRING WELL <input type="checkbox"/>
FRACTURE TREAT <input type="checkbox"/>	MULTIPLE COMPLETION <input type="checkbox"/>	FRACTURE TREATMENT <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
SHOOT OR ACIDIZE <input type="checkbox"/>	ABANDON* <input type="checkbox"/>	SHOOTING OR ACIDIZING <input type="checkbox"/>	ABANDONMENT* <input checked="" type="checkbox"/>
REPAIR WELL <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	(Other) <input type="checkbox"/>	
(Other) <input type="checkbox"/>		(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)	

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

CONFIDENTIAL

Marathon Oil Company plugged the above well as follows:

Plug Placement

Plug #1	6122' to 5670'	150 sacks Class 'B'
Plug #2	5096' to 4780'	110 sacks Class 'B'
Set a retainer at 2177' (130 sacks below & 25 sacks on top)		
	2350' to 2125'	
Plug #4	64' to 14' KB	25 sacks Class 'B'

Set dry hole marker.

BLM-Orig & 3--cc: SUDOGM-2, WRF, FMK, WTR, JLS, Title & Contract (Houston)

18. I hereby certify that the foregoing is true and correct

SIGNED R.P. Mealan

TITLE Regulatory Coordinator

DATE March 22, 1988

(This space for Federal or State office use)

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

ACCEPTED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING

DATE 3-25-88

BY John R. Bays

*See Instructions on Reverse Side